

A Deep Dive into an AI Startup Company in the Pandemic

Li Zhang

University of Illinois at Urbana Champaign

Austin Chen

New York University

A Deep Dive into an AI Startup Company in the Pandemic

Abstract: This case will take you on a roller-coaster ride through the second quarter of 2020, as you help a CEO of a high-tech start-up company cut costs and increase sales to weather the COVID-19 pandemic. Based on a past budget report, you will provide managerial accounting insights to the CEO to make decisions as the company changes its business model in response to the pandemic. You will analyze historic salary data to compute the Paycheck Protection Program (PPP) loan dollar amount, revise the budget, and predict cash runway under different scenarios. Discussion topics will include budgeting, breakeven analysis, data analytics, cash burn, cash runway, discretionary costs, fixed costs, PPP loans, EIDL loans, and company compliance.

Introduction

Sitting in his office at Thousand Oaks, CA on February 12, 2020, Nathan Chang, the CEO and founder of AI Luxe Inc., had a smile on his face. The company was incorporated in 2017 as a C corporation and had been funded by private investors and NSF Small Business Innovation Reward (SBIR) grants. Its mission was to provide hardware accelerator solutions with a machine-learning optimization toolkit to enable smart IoT applications. After pivoting its product development several times in the last two years, Nathan and his team decided to focus on facial recognition and object detection in construction sites. The team used deep neural networks to deliver machine learning solutions on edge devices, such as security cameras, to detect unusual movement at worksites and provide warnings for safety violations. Several weeks ago, AI Luxe delivered its visual analytics solutions to a major Construction Company as part of the test of concept. Today, Nathan heard back from the Construction Company. They were very pleased with the performance. The Construction Company was interested in entering a second phase of a major contract.

“Let’s hammer out the details of this contract as soon as possible,” Nathan said to Daniel Bliss, the Director of Marketing in the company.

“If all goes well, we should expect to get this contract done before we head to New York in March,” Daniel replied. “Hopefully, our product showcase will bring in more customers.” Daniel and Nathan had a booth for a major trade show scheduled in late March in New York.

In the following few weeks, Nathan and Daniel worked with the company’s legal counsel and the Construction Company to draft, negotiate, and refine the contract. In the meantime, they interviewed job candidates and planned to hire two more software engineers to work on the project.

The new recruits will start in May, making the company’s total number of full-time employees rise to ten. At the moment, the company has eight full-time employees (out of which

six are engineers), two part-time engineering student interns, and two independent contractors. The company has also obtained entrepreneur funding to cover its accounting fees from a local CPA firm and has received other services from a student-run business consulting club. The local CPA firm takes care of AI Luxe's bookkeeping and prepares the monthly financial statements. The business consulting club provides analytics as needed to help advise Nathan on managerial decisions.

Part I: Pandemic Hit – Sources of Funding for Small Business

By Monday, March 2, the COVID-19 pandemic in New York City was getting out of control. As a result, the semi-annual industry trade show was postponed indefinitely. To make matters worse, the Construction Company wavered in signing the second phase contract, postponing their decision to 2021, because all construction work had been halted indefinitely. Faced with a dire situation, Nathan met with Daniel again.

Nathan: "With the current situation, I expect sales to slow down, and investors to run away due to the stock market crash. That means we need to plan for a disaster scenario to stay alive. It is impossible to continue without cutting costs. What actions should we take to reduce our burn rate to \$100,000 per month or less?"

Daniel: "Our current monthly cash burn is \$180,000. All our future travel plans were cancelled, which saves us \$10,000 per month."

Nathan: "That's not enough. I am afraid we will have to make some pay cuts or layoffs. Our cash runway was six months with old sales growth projections, but that now seems all but gone."

Daniel: "Now we can't do on-site visits of potential customers, which was the best way to get sales contracts. I am concerned about how we are going to expand our sales with the cancellation of trade shows."

Nathan: "From what I've read online, this pandemic is not going to go away anytime soon. We cannot rely on on-site demos or trade shows now; we will have to switch to heavy online targeted marketing. In addition, we might have to take a pay cut, lay off part-time employees, or change full-time employees to part-time employees."

Daniel vehemently opposed the pay-cut idea. "Hold on, we need to be very careful with these kinds of drastic measures. Our actions could damage employee morale and force an unsustainable financial burden upon our employees. I, for one, cannot live on 50% of my current salary. I have a mortgage to pay and mouths to feed. A pay cut would force me to take on a part-time job delivering food."

Nathan shook his head dejectedly. “It’s either the company goes out of business soon and everyone loses their job, or everyone takes a pay cut, and the company has a chance to survive. This is our last resort. I don’t see any other way out of this crisis, do you?”

“The CARES Act that Congress has been working on promises to provide much-needed funding to small businesses like us,” Daniel replied. “How about we wait until after the Senate passes the bill and see if our company qualifies for government relief loans?”

After the meeting, Nathan brainstormed potential financing options. One option would be to obtain additional funding from potential shareholders. Another would be to borrow money from a local bank or a PPP loan from the government. In addition to these external financing options, laying off employees and/or taking salary cuts across the board seemed to be unavoidable. Nathan’s wife taught at a local middle school, so a salary cut would not put their family in eminent financial danger. However, other employees whose families relied on a single source of income may not fare as well. Since trade shows and on-site marketing activities were postponed, the only employees with daily assignments were the engineers in the company in charge of research and development. Should Nathan and Daniel receive the same pre-pandemic salary even though their workloads have diminished significantly post-pandemic? As the sun began to set, Nathan continued to consider the firm’s future.

On March 19, Governor Newsom issued an executive “stay at home” order to protect the health of Californians. All employees began to work remotely from home. On March 26, Daniel sent a link to Nathan, which provided information on several low-interest and potentially forgivable government loans. Both men were excited - AI Luxe could qualify for PPP loans which could primarily be used to pay employees’ salaries. According to the SBA website, the Paycheck Protection Program is a loan “designed to provide a direct incentive for small businesses to keep their workers on payroll.” The loans can be used to help fund payroll costs including benefits, and to pay for mortgage interest, rent, utilities, and workers’ protection costs related to COVID-19. This loan would help sustain the company for a couple of months and delay any pay cuts and/or terminations. In addition to the PPP, the government also provided COVID-19 Economic Injury Disaster Loans. Information on the loans is available on the following websites. (Note: The SBA website contains information for the second round of PPP and EIDL for 2021. But the eligibility criteria are like the PPP and EIDL in 2020. Click on “First Draw PPP Loans” link for relevant information.)

<https://www.sba.gov/funding-programs/loans/coronavirus-relief-options/paycheck-protection-program>

<https://www.sba.gov/funding-programs/loans/coronavirus-relief-options/covid-19-economic-injury-disaster-loans>

<https://home.treasury.gov/policy-issues/cares/assistance-for-small-businesses>

Nathan forwarded the student-run business consulting club the above website links and asked them to summarize AI Luxe's eligibility and the compliance requirements for these two loan programs. This is where you come in. Suppose you are members of the business consulting club. Read the information provided online and discuss the following questions. Be sure to include any suggestions you have on cost cutting and product pivoting during the pandemic. Summarize your findings and discussions in a memo (maximum three pages not including a spreadsheet).

Requirement:

1. What are the external sources of funding for AI Luxe? Discuss how likely it would be for a wealthy investor to consider investing in AI Luxe in March 2020. Discuss whether a bank would lend money to AI Luxe in March 2020. Find out, by searching online or calling a bank, what a bank looks for when providing a loan to a startup. Note that AI Luxe does not have any current assets or significant fixed assets for a collateral loan.

2. Based on the information provided on the website, does AI Luxe qualify for PPP? Please summarize eligibility criteria and loan terms.

3. Based on the information provided on the website, does AI Luxe qualify for EIDL? Please summarize eligibility criteria and loan terms.

4. Based on last year's payroll summary information (see the attached spreadsheet), estimate the amount of PPP that AI Luxe can apply for using the attached PPP calculation table. Illustrate how the PPP loan amount is computed in a spreadsheet. Note the annual salary cap of \$100,000 for each employee (excluding benefits and tax).

5. Based on AI Luxe recent budget report, discuss whether each cost items are discretionary costs, fixed costs. In other words, which cost item can be reduced or eliminated during the pandemic. What factors do you need to consider when making a cost-cut proposal?

6. What other markets could AI Luxe target with its visual analytics product during the pandemic? For more information on visual analytics products, check out <https://www.indus.ai/>

Part II: The Prospect of Survival

On April 3, Daniel heard that some companies had already obtained PPP loans within several days of applying to large banks. The LA Lakers and several national restaurant chains had already obtained millions from PPP loans, while many small businesses such as AI Luxe were still anxiously waiting for their local home bank to start accepting PPP loan applications. On April 7, the local CPA, Michelle, who oversaw AI Luxe's bookkeeping and tax filing, began to prepare the firm's PPP loan application. She would have to compile and submit all required payroll documents, rent invoices, etc. to the local bank.

Exhibit 2 is the PPP loan application form that Nathan will need to complete and sign. The loan amount is the sum of 2.5 months (ten weeks) of rent, utilities, salary, and state payroll taxes. The salary is calculated and rounded using 2.5 months of average salary based on the company's annual salary information in 2019, subject to a \$100,000 salary cap for high-paid employees. The student-run business consulting club had computed the loan amount and it was about \$150,000.

Michelle informed Nathan that if the company met certain criteria, the PPP loan amount would be completely forgiven. If, however, AI Luxe laid off any employees or reduced any employees' working hours during the covered period which was either 8 or 24 weeks, then the forgiven amount would be reduced proportionately. In addition, if the company reduced salary by 25% or more during the coverage period, the forgiven amount will also be reduced accordingly. Nathan was hopeful that the PPP loan would be approved, and the money would be received by the end of the April.

After the fall out with Construction Company and the second phase contract, AI Luxe decided to pivot and focus on selling to companies specializing in securities cameras. Before the pandemic hit, Daniel already visited Safety Guard Company in Indiana that specialized in installing security cameras in nursing homes and schools. During the visit, the firm showed interest in the visual analytics solutions that AI Luxe provided. Safety Guard Company finally decided to purchase licensing from AI Luxe and incorporate the visual analytics solutions to its securities package provided to its end users. After several rounds of internal discussion, AI Luxe proposed the following sales package: \$7,500 per license for a minimal annual purchase of 20 units; or \$10,000 per license for a minimal annual purchase of 10 units. Details can be found in the license price table. It was not clear at this point how many licenses the Safety Guard Company would order. Cash payment and revenues from sales were expected to arrive in July. In addition to Safety Guard Company, AI Luxe launched online targeted marketing to other similar OEM in the security camera market.

As of April 1, the company has a cash balance of approximately \$720,000. Its current monthly operating expenses are primarily payroll expenses for sales, general and administrative, as well as research and development. Other major expenses include marketing expenses (travel costs to trade shows and onsite demos), legal expenses, and hardware expenses. Please refer to the budget report for January to March 2020 that was provided to you in the first part of the case.

Looking forward, Nathan plans to control monthly expenses by eliminating unnecessary spending. First, salary cuts should be at a level that is compliant with PPP guidance, to maximize forgiven amount. All trade show budgeted costs would be reduced to zero till the year end. Independent contractors' hours would be cut to zero. No new hires would be made in May as originally planned. The company has moved to a much smaller office with a monthly rent of \$1,500 on April 1.

Nathan needed help from the business consulting club to identify other cost reduction opportunities, and to prepare a budget following these guidelines for the remainder of 2020. He wants to know the monthly cash burn (average monthly total expenses) and cash runway. Cash runway is how long the company can stay in business till it runs out of its cash reserve. It is calculated as total cash available divided by monthly cash burn.

After you prepare the budget, based on the reduced monthly spending, calculate monthly cash burn and cash runway for the following scenarios:

Scenario 1: With PPP loan of \$150,000, with pay cut, with 10 units of annual sales of license.

Scenario 2: With PPP loan of \$150,000, with pay cut, with 20 units of annual sales of license.

Scenario 3: With PPP loan of \$150,000, no salary cut, with 10 units of annual sales of license.

Scenario 4: With PPP loan of \$150,000, no salary cut, with 20 units of annual sales of license.

The earliest the company could start a pay cut would be May 1, but it would be rushed. Nathan would like to talk to each employee over the phone and persuade each to sign a voluntary pay cut agreement. Considering the employees' resistance to pay cut, the company may delay pay cut starting time till after exhausting PPP money, say July 1. You would decide on a pay cut percentage and a starting date for scenario 1 and 2. The constraint is that you do not want to violate the threshold of 25% set in the PPP loan forgiveness requirement. Please provide some quantitative and qualitative reasoning to Nathan as to why you would recommend the pay cut percentage and the starting date. As the founder of the company, Nathan would prefer to maximize the cash runway, if possible, to ride out the pandemic.

Requirement:

7. Based on your assumptions, forecasted budget expenses (using the Forecast Budget Student Template), and analysis, write a memo with your results to help Nathan decide whether a pay cut is necessary. The memo should also include when and how much the pay cut will be. Complete the Monthly Cash Flow and Balance Table, then report the monthly cash burn and cash runway for each scenario. Use visualization such as graphs in your memo. State clearly any assumptions you have made. In addition, please address the following questions. What are your thoughts on payroll cuts and laying off employees during the pandemic? Should Nathan start a pay cut as soon as possible? Or wait until after the PPP loan is exhausted?
8. How useful is the PPP loan to the company's survival and an ultimate turnaround?
9. Assume that the variable cost per license is \$500 and total annual fixed cost is twelve times your monthly budgeted expenses including pay cut. Please calculate, without the PPP loan, how many licenses the company needs to sell in the next twelve months to

break-even? There is more than one right answer here depending on your assumption of sales mix.

For example, you may assume a sales mix of 1:1 in units for licenses sold at \$7,500 versus \$10,000.

10. As a top executive signing the PPP application, what legal responsibilities does Nathan have to bear in mind? (Refer to PPP Loan Application Form)
11. Search online for a case of PPP fraud and explain the legal consequences for the company/perpetrator that was committed the fraud.

AI Lux Inc.

Payroll Summary by Employee

Jan 01 - Dec 31, 2019

	TOTAL AMOUNT	Eric Ayalur	Daniel Bliss	Victor Carian	Nathan Chang	Edmond Ferguson	Inactive Joseph Flueck	Jessica Henriades	Yolanda Klein	Inactive Frank Madsen	Barry Sehgal	Anil Slowik	Inactive Shiva Sundar	Inactive Jose Tejuana	Jeffrey Yokoo
EMPLOYEES WAGES, TAXES & ADJUSTMENTS															
Gross Pay															
Regular hourly employees	\$49,976.83	\$23,377.97													\$26,598.86
Bonus	\$2,300.00	\$600.00						600	500		600				
Salary	\$803,964.75		\$140,000.00	\$30,132.81	\$200,000.00	\$29,067.44	\$15,000.00	\$128,500.00	\$42,496.66	\$15,000.00	\$120,000.00	\$40,743.58	\$24,634.67		\$18,389.59
Health Insurance	\$1,482.00						450			\$450.00			\$582.00		
Allowance	\$4,000.00										\$4,000.00				
Total Gross Pay	\$861,723.58	\$23,977.97	\$140,000.00	\$30,132.81	\$200,000.00	\$29,067.44	\$15,450.00	\$129,100.00	\$42,996.66	\$15,450.00	\$124,600.00	\$40,743.58	\$25,216.67	\$26,598.86	\$18,389.59
Other Pay															
Total Other Pay															
Deductions from Gross Pay															
HSA bank	\$1,200.00							\$1,200.00							
Total Deductions from Gross Pay	\$1,200.00							\$1,200.00							
Adjusted Gross Pay	\$860,523.58	\$23,977.97	\$140,000.00	\$30,132.81	\$200,000.00	\$29,067.44	\$15,450.00	\$127,900.00	\$42,996.66	\$15,450.00	\$124,600.00	\$40,743.58	\$25,216.67	\$26,598.86	\$18,389.59
Taxes Withheld															
FIT	-\$111,060.50	-\$2,173.78	-\$19,896.37	-\$3,361.28	-\$29,659.04	-\$1,945.98	-\$1,800.00	-\$18,777.62	-\$3,399.63	-\$1,848.17	-\$17,240.17	-\$4,919.60	-\$2,803.46	-\$2,133.82	-\$1,101.58
SS	-\$42,591.52	-\$1,486.63	-\$8,239.80	-\$1,868.23	-\$8,239.80	-\$1,802.18	0	-\$8,004.20	-\$2,665.79	0	-\$7,477.20	0	0	-\$1,649.13	-\$1,158.54
Med	-\$11,048.47	-\$347.68	-\$2,030.00	-\$436.93	-\$2,900.00	-\$421.48	0	-\$1,871.95	-\$623.45	0	-\$1,748.70	0	0	-\$392.93	-\$275.35
CA PIT	-\$77,880.08	-\$479.56	-\$13,020.00	-\$2,802.35	-\$18,600.00	-\$2,703.27	-\$1,395.00	-\$12,006.30	-\$3,998.69	-\$1,395.00	-\$11,215.80	-\$3,789.15	-\$2,291.02	-\$2,473.69	-\$1,710.23
CA SDI	-\$7,400.26	-\$239.78	-\$1,183.71	-\$301.33	-\$1,183.71	-\$290.67	-\$150.00	-\$1,183.71	-\$429.97	-\$150.00	-\$1,183.71	-\$407.44	-\$246.35	-\$265.99	-\$183.90
Total Taxes Withheld	-\$249,980.81	-\$4,825.61	-\$21,537.79	-\$4,812.29	-\$16,075.54	-\$5,470.81	-\$35.30	-\$17,158.58	-\$8,617.02	-\$2,555.09	-\$4,838.05	-\$6,797.87	-\$3,929.03	-\$5,548.29	-\$3,494.25
Deductions from Net Pay															
Blue Cross Blue Shield - health care															
Blue Cross Blue Shield - health care	-\$6,358.40		-\$2,820.07			-\$77.49		-\$518.42			-\$2,400.00	-\$542.42			
BCBS dental	-\$239.75		-\$100.00			-\$3.99		-\$27.87			-\$80.00	-\$27.89			
Total Deductions from Net Pay	-\$6,598.15		-\$2,920.07			-\$81.48		-\$546.29			-\$2,480.00	-\$570.31			
NET PAY	\$377,381.93	\$16,220.60	\$63,941.75	\$29,120.70	\$36,465.24	\$23,515.15	\$1,234.04	\$45,620.68	\$33,879.64	\$12,802.83	\$22,872.43	\$33,375.32	\$21,287.64	\$21,550.57	\$15,495.34
EMPLOYER TAXES & CONTRIBUTIONS															
FUTA	-\$420.00	-\$42.00	-\$42.00	-\$42.00	-\$42.00	-\$42.00	0	-\$42.00	-\$42.00	0	-\$42.00	0	0	-\$42.00	-\$42.00
SS	-\$42,591.52	-\$1,486.63	-\$8,239.80	-\$1,868.23	-\$8,239.80	-\$1,802.18	\$0.00	-\$8,004.20	-\$2,665.79	\$0.00	-\$7,477.20	\$0.00	\$0.00	-\$1,649.13	-\$1,158.54
Med	-\$11,048.47	-\$347.68	-\$2,030.00	-\$436.93	-\$2,900.00	-\$421.48	\$0.00	-\$1,871.95	-\$623.45	\$0.00	-\$1,748.70	\$0.00	\$0.00	-\$392.93	-\$275.35
CA ETT	-\$98.00	-\$7.00	-\$7.00	-\$7.00	-\$7.00	-\$7.00	-\$7.00	-\$7.00	-\$7.00	-\$7.00	-\$7.00	-\$7.00	-\$7.00	-\$7.00	-\$7.00
CA SUI	-\$7,400.26	-\$239.78	-\$1,183.71	-\$301.33	-\$1,183.71	-\$290.67	-\$150.00	-\$1,183.71	-\$429.97	-\$150.00	-\$1,183.71	-\$407.44	-\$246.35	-\$265.99	-\$183.90
Blue Cross Blue Shield - health care															
Blue Cross Blue Shield - health care	-\$19,075.10		-\$8,460.21			-\$232.46		-\$1,555.26			-\$7,200.00	-\$1,627.17			
BCBS dental	-\$719.26		-\$300.00			-\$11.96		-\$83.62			-\$240.00	-\$83.68			
Total Employer Taxes and Contributions	-\$81,352.60	-\$2,123.09	-\$20,262.72	-\$2,655.49	-\$12,372.51	-\$2,807.75	-\$157.00	-\$12,747.74	-\$3,768.21	-\$157.00	-\$17,898.61	-\$2,125.29	-\$253.35	-\$2,357.05	-\$1,666.79

Note: Inactive employees were summer student interns.

Note to Payroll Summary:

FIT: Federal Income Tax is based on each employee's filing status as reported on W-4 form.

SS: Social Security's Old-Age, Survivors, and Disability Insurance (OASDI) tax rate is 6.2% for wages up to \$132,900.

So an employee with wages up to or above the maximum in 2019 would pay \$8,239.80 in tax and the employer would pay an equal amount.

Med: Medicare insurance tax of 1.45% each for employees and employers has no wage limit.

Note: Student interns on OPT, OPT extension, CPT status are exempt from SS and Medicare taxes. H-1B visa holders are not exempt.

CA PIT: Based on California income tax table and filing status

CA SDI: The State Disability Insurance (SDI) withholding rate for 2019 is 1.00 percent. The taxable wage limit is \$118,371 for each employee per calendar year.

The maximum to withhold for each employee is \$1,183.71.

FUTA: The Federal Unemployment Tax Act tax is 6.0% (0.060) for 2019 of the first \$7,000 of each employee's annual wages.

CA ETT: The Employment Training Tax rate for 2019 is 0.1 percent. The UI and ETT taxable wage limit remains at \$7,000 per employee per calendar year.

CA SDI: The State Disability Insurance (SDI) withholding rate for 2019 is 1.00 percent. The taxable wage limit is \$118,371 for each employee per calendar year.

PPP Calculation

	Annual Total	Average Monthly Payroll Cost	PPP Loan
Total Gross Pay			
Subtract salary above 100k, or monthly Salary above \$8,333.33			
Daniel B.			
Nathan C.			
Jessica H.			
Barry S.			
Adjusted Gross pay for PPP Loan			
FUTA (not included in PPP calculation)	skip		
SS tax (not included in PPP calculation)	skip		
Medicare (not included in PPP calculation)	skip		
CA ETT (included in PPP calculation)			
CA SUI (included in PPP calculation)			
health care (included in PPP calculation)			
Total Payroll Cost including state taxes and health care			

Budget Report on Expenses for the First Quarter of 2020

	January			February			March		
	Budget	Actual	U/O budget	Budget	Actual	U/O budget	Budget	Actual	U/O budget
Sales & Marketing	\$38,700	\$43,300	\$4,600	\$38,000	\$32,359	(\$5,641)	\$24,000	\$22,497	(\$1,503)
Salaries	\$20,000	\$19,820	(\$180)	\$20,000	\$19,820	(\$180)	\$20,000	\$19,820	(\$180)
Tradeshows	\$10,700	\$15,700	\$5,000	\$10,000	\$8,020	(\$1,980)	\$0	\$510	\$510
Digital Marketing Expense	\$2,000	\$2,000	\$0	\$2,000	\$2,000	\$0	\$2,000	\$2,000	\$0
Travel-Customer Sites	\$6,000	\$5,780	(\$220)	\$6,000	\$2,519	(\$3,481)	\$2,000	\$167	(\$1,833)
General & Administrative	\$43,100	\$41,337	(\$1,763)	\$67,300	\$65,967	(\$1,333)	\$43,100	\$40,625	(\$2,475)
Salaries	\$25,000	\$25,450	\$450	\$25,000	\$25,450	\$450	\$25,000	\$25,450	\$450
Recurring Expense	\$18,100	\$15,887	(\$2,213)	\$25,100	\$23,317	(\$1,783)	\$18,100	\$15,175	(\$2,925)
Legal and Professional Expense	\$12,000	\$10,000	(\$2,000)	\$19,000	\$17,684	(\$1,316)	\$12,000	\$10,000	(\$2,000)
Office Supplies & Software	\$1,500	\$1,400	(\$100)	\$1,500	\$1,200	(\$300)	\$1,500	\$1,000	(\$500)
Office Rent	\$4,000	\$4,000	\$0	\$4,000	\$4,000	\$0	\$4,000	\$4,000	\$0
Misc.- Meals	\$400	\$312	(\$88)	\$400	\$258	(\$142)	\$400	\$0	(\$400)
Bank Charges	\$200	\$175	(\$25)	\$200	\$175	(\$25)	\$200	\$175	(\$25)
Nonrecurring Expense	\$0	\$0	\$0	\$17,200	\$17,200	\$0	\$0	\$0	\$0
License Expense	\$0	\$0	\$0	\$10,000	10000	\$0	\$0	\$0	\$0
Auditing	\$0	\$0	\$0		0	\$0	\$0	\$0	\$0
Insurance expense	0	0	\$0	\$7,200	\$7,200	\$0	\$0	\$0	\$0
Research & Development	\$94,500	\$91,007	(\$3,493)	\$94,500	\$89,863	(\$4,637)	\$94,500	\$91,007	(\$3,493)
Salaries	\$81,000	\$78,277	(\$2,723)	\$81,000	\$78,300	(\$2,700)	\$81,000	\$78,277	(\$2,723)
Cloud computing	\$4,500	\$4,000	(\$500)	\$4,500	\$3,500	(\$1,000)	\$4,500	\$4,000	(\$500)
Hardware	\$6,000	\$5,800	(\$200)	\$6,000.00	\$5,413	(\$587)	\$6,000	\$5,800	(\$200)
Software	\$500	\$450	(\$50)	\$500.00	\$450.00	(\$50)	\$500	\$450	(\$50)
Independent Contractors	\$2,500	\$2,480	(\$20)	\$2,500	\$2,200	(\$300)	\$2,500	\$2,480	(\$20)
Total Monthly Expenses	\$176,300	\$175,644	(\$656)	\$199,800	\$188,189	(\$11,611)	\$161,600	\$154,129	(\$7,471)

Reference Table - License Price

Units Ordered	Unit price
0	\$12,500
1	\$12,500
2	\$12,500
3	\$12,500
4	\$12,500
5	\$12,500
6	\$12,500
7	\$12,500
8	\$12,500
9	\$12,500
10	\$10,000
11	\$10,000
12	\$10,000
13	\$10,000
14	\$10,000
15	\$10,000
16	\$10,000
17	\$10,000
18	\$10,000
19	\$10,000
20	\$7,500
21	\$7,500
22	\$7,500
23	\$7,500
24	\$7,500
25	\$7,500
26	\$7,500
27	\$7,500
28	\$7,500
29	\$7,500
30	\$7,500



**Paycheck Protection Program
Borrower Application Form Revised June 24, 2020**

OMB Control No.: 3245-0407
Expiration Date: 10/31/2020

Check One:	<input type="checkbox"/> Sole proprietor <input type="checkbox"/> Partnership <input checked="" type="checkbox"/> C-Corp <input type="checkbox"/> S-Corp <input type="checkbox"/> LLC <input type="checkbox"/> Independent contractor <input type="checkbox"/> Eligible self-employed individual <input type="checkbox"/> 501(c)(3) nonprofit <input type="checkbox"/> 501(c)(19) veterans organization <input type="checkbox"/> Tribal business (sec. 31(b)(2)(C) of Small Business Act) <input type="checkbox"/> Other	DBA or Tradename if Applicable	
Business Legal Name			
AI LUX INC.			
Business Address		Business TIN (EIN, SSN)	Business Phone
1688 Enterprise Lane.		85-231465	(805) 123-4567
Thousand Oak, CA 91320		Primary Contact	Email Address
		Nathan Chang	Nathan.Chang@ai-lux.com

Average Monthly Payroll:	\$	x 2.5 + EIDL, Net of Advance (if Applicable) Equals Loan Request:	\$	Number of Employees:	10
Purpose of the loan (select more than one):					
<input checked="" type="checkbox"/> Payroll <input checked="" type="checkbox"/> Lease / Mortgage Interest <input checked="" type="checkbox"/> Utilities <input type="checkbox"/> Other (explain): _____					

Applicant Ownership

List all owners of 20% or more of the equity of the Applicant. Attach a separate sheet if necessary.

Owner Name	Title	Ownership %	TIN (EIN, SSN)	Address

If questions (1) or (2) below are answered "Yes," the loan will not be approved.

Question	Yes	No
1. Is the Applicant or any owner of the Applicant presently suspended, debarred, proposed for debarment, declared ineligible, voluntarily excluded from participation in this transaction by any Federal department or agency, or presently involved in any bankruptcy?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2. Has the Applicant, any owner of the Applicant, or any business owned or controlled by any of them, ever obtained a direct or guaranteed loan from SBA or any other Federal agency that is currently delinquent or has defaulted in the last 7 years and caused a loss to the government?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3. Is the Applicant or any owner of the Applicant an owner of any other business, or have common management with any other business? If yes, list all such businesses and describe the relationship on a separate sheet identified as addendum A.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
4. Has the Applicant received an SBA Economic Injury Disaster Loan between January 31, 2020 and April 3, 2020? If yes, provide details on a separate sheet identified as addendum B.	<input type="checkbox"/>	<input checked="" type="checkbox"/>

If questions (5) or (6) are answered "Yes," the loan will not be approved.

Question	Yes	No
5. Is the Applicant (if an individual) or any individual owning 20% or more of the equity of the Applicant presently incarcerated or, for any felony, presently subject to an indictment, criminal information, arraignment, or other means by which formal criminal charges are brought in any jurisdiction? Initial here to confirm your response to question 5 → _____	<input type="checkbox"/>	<input checked="" type="checkbox"/>
6. Within the last 5 years, for any felony involving fraud, bribery, embezzlement, or a false statement in a loan application or an application for federal financial assistance, or within the last year, for any other felony, has the Applicant (if an individual) or any owner of the Applicant 1) been convicted; 2) pleaded guilty; 3) pleaded nolo contendere; or 4) commenced any form of parole or probation (including probation before judgment)? Initial here to confirm your response to question 6 → _____	<input type="checkbox"/>	<input checked="" type="checkbox"/>
7. Is the United States the principal place of residence for all employees of the Applicant included in the Applicant's payroll calculation above?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
8. Is the Applicant a franchise that is listed in the SBA's Franchise Directory?	<input type="checkbox"/>	<input checked="" type="checkbox"/>



**Paycheck Protection Program
Borrower Application Form Revised June 24, 2020**

By Signing Below, You Make the Following Representations, Authorizations, and Certifications

CERTIFICATIONS AND AUTHORIZATIONS

I certify that:

- I have read the statements included in this form, including the Statements Required by Law and Executive Orders, and I understand them.
- The Applicant is eligible to receive a loan under the rules in effect at the time this application is submitted that have been issued by the Small Business Administration (SBA) implementing the Paycheck Protection Program under Division A, Title I of the Coronavirus Aid, Relief, and Economic Security Act (CARES Act) (the Paycheck Protection Program Rule).
- The Applicant (1) is an independent contractor, eligible self-employed individual, or sole proprietor or (2) employs no more than the greater of 500 or employees or, if applicable, the size standard in number of employees established by the SBA in 13 C.F.R. 121.201 for the Applicant’s industry.
- I will comply, whenever applicable, with the civil rights and other limitations in this form.
- All SBA loan proceeds will be used only for business-related purposes as specified in the loan application and consistent with the Paycheck Protection Program Rule.
- To the extent feasible, I will purchase only American-made equipment and products.
- The Applicant is not engaged in any activity that is illegal under federal, state or local law.
- Any loan received by the Applicant under Section 7(b)(2) of the Small Business Act between January 31, 2020 and April 3, 2020 was for a purpose other than paying payroll costs and other allowable uses loans under the Paycheck Protection Program Rule.

For Applicants who are individuals: I authorize the SBA to request criminal record information about me from criminal justice agencies for the purpose of determining my eligibility for programs authorized by the Small Business Act, as amended.

CERTIFICATIONS

The authorized representative of the Applicant must certify in good faith to all of the below by **initialing** next to each one:

- _____ The Applicant was in operation on February 15, 2020 and had employees for whom it paid salaries and payroll taxes or paid independent contractors, as reported on Form(s) 1099-MISC.
- _____ Current economic uncertainty makes this loan request necessary to support the ongoing operations of the Applicant.
- _____ The funds will be used to retain workers and maintain payroll or make mortgage interest payments, lease payments, and utility payments, as specified under the Paycheck Protection Program Rule; I understand that if the funds are knowingly used for unauthorized purposes, the federal government may hold me legally liable, such as for charges of fraud.
- _____ The Applicant will provide to the Lender documentation verifying the number of full-time equivalent employees on the Applicant’s payroll as well as the dollar amounts of payroll costs, covered mortgage interest payments, covered rent payments, and covered utilities for the 24-week period following this loan.
- _____ I understand that loan forgiveness will be provided for the sum of documented payroll costs, covered mortgage interest payments, covered rent payments, and covered utilities, and not more than 40% of the forgiven amount may be for non-payroll costs.
- _____ During the period beginning on February 15, 2020 and ending on December 31, 2020, the Applicant has not and will not receive another loan under the Paycheck Protection Program.
- _____ I further certify that the information provided in this application and the information provided in all supporting documents and forms is true and accurate in all material respects. I understand that knowingly making a false statement to obtain a guaranteed loan from SBA is punishable under the law, including under 18 USC 1001 and 3571 by imprisonment of not more than five years and/or a fine of up to \$250,000; under 15 USC 645 by imprisonment of not more than two years and/or a fine of not more than \$5,000; and, if submitted to a federally insured institution, under 18 USC 1014 by imprisonment of not more than thirty years and/or a fine of not more than \$1,000,000.
- _____ I acknowledge that the lender will confirm the eligible loan amount using required documents submitted. I understand, acknowledge and agree that the Lender can share any tax information that I have provided with SBA’s authorized representatives, including authorized representatives of the SBA Office of Inspector General, for the purpose of compliance with SBA Loan Program Requirements and all SBA reviews.

Signature of Authorized Representative of Applicant

Nathan Chang

Print Name

Date

CEO

Title



Paycheck Protection Program Borrower Application Form Revised June 24, 2020

Purpose of this form:

This form is to be completed by the authorized representative of the Applicant and *submitted to your SBA Participating Lender*. Submission of the requested information is required to make a determination regarding eligibility for financial assistance. Failure to submit the information would affect that determination.

Instructions for completing this form:

With respect to “purpose of the loan,” payroll costs consist of compensation to employees (whose principal place of residence is the United States) in the form of salary, wages, commissions, or similar compensation; cash tips or the equivalent (based on employer records of past tips or, in the absence of such records, a reasonable, good-faith employer estimate of such tips); payment for vacation, parental, family, medical, or sick leave; allowance for separation or dismissal; payment for the provision of employee benefits consisting of group health care coverage, including insurance premiums, and retirement; payment of state and local taxes assessed on compensation of employees; and for an independent contractor or sole proprietor, wage, commissions, income, or net earnings from self-employment or similar compensation.

For purposes of calculating “Average Monthly Payroll,” most Applicants will use the average monthly payroll for 2019, excluding costs over \$100,000 on an annualized basis for each employee. For seasonal businesses, the Applicant may elect to instead use average monthly payroll for the time period between February 15, 2019 and June 30, 2019 or any 12-week period between May 1, 2019 and September 15, 2019, excluding costs over \$100,000 on an annualized basis for each employee. For new businesses, average monthly payroll may be calculated using the time period from January 1, 2020 to February 29, 2020, excluding costs over \$100,000 on an annualized basis for each employee.

If Applicant is refinancing an Economic Injury Disaster Loan (EIDL): Add the outstanding amount of an EIDL made between January 31, 2020 and April 3, 2020, less the amount of any “advance” under an EIDL COVID-19 loan, to Loan Request as indicated on the form.

All parties listed below are considered owners of the Applicant as defined in 13 CFR § 120.10, as well as “principals”:

- For a sole proprietorship, the sole proprietor;
- For a partnership, all general partners, and all limited partners owning 20% or more of the equity of the firm;
- For a corporation, all owners of 20% or more of the corporation;
- For limited liability companies, all members owning 20% or more of the company; and
- Any Trustor (if the Applicant is owned by a trust).

Paperwork Reduction Act – You are not required to respond to this collection of information unless it displays a currently valid OMB Control Number. The estimated time for completing this application, including gathering data needed, is 8 minutes. Comments about this time or the information requested should be sent to: Small Business Administration, Director, Records Management Division, 409 3rd St., SW, Washington DC 20416, and/or SBA Desk Officer, Office of Management and Budget, New Executive Office Building, Washington DC 20503. **PLEASE DO NOT SEND FORMS TO THESE ADDRESSES.**

Privacy Act (5 U.S.C. 552a) – Under the provisions of the Privacy Act, you are not required to provide your social security number. Failure to provide your social security number may not affect any right, benefit or privilege to which you are entitled. (But see Debt Collection Notice regarding taxpayer identification number below.) Disclosures of name and other personal identifiers are required to provide SBA with sufficient information to make a character determination. When evaluating character, SBA considers the person’s integrity, candor, and disposition toward criminal actions. Additionally, SBA is specifically authorized to verify your criminal history, or lack thereof, pursuant to section 7(a)(1)(B), 15 USC Section 636(a)(1)(B) of the Small Business Act (the Act).

Disclosure of Information – Requests for information about another party may be denied unless SBA has the written permission of the individual to release the information to the requestor or unless the information is subject to disclosure under the Freedom of Information Act. The Privacy Act authorizes SBA to make certain “routine uses” of information protected by that Act. One such routine use is the disclosure of information maintained in SBA’s system of records when this information indicates a violation or potential violation of law, whether civil, criminal, or administrative in nature. Specifically, SBA may refer the information to the appropriate agency, whether Federal, State, local or foreign, charged with responsibility for, or otherwise involved in investigation, prosecution, enforcement or prevention of such violations. Another routine use is disclosure to other Federal agencies conducting background checks but only to the extent the information is relevant to the requesting agencies’ function. *See*, 74 F.R. 14890 (2009), and as amended from time to time for additional background and other routine uses. In addition, the CARES Act, requires SBA to register every loan made under the Paycheck Protection Act using the Taxpayer Identification Number (TIN) assigned to the borrower.

Debt Collection Act of 1982, Deficit Reduction Act of 1984 (31 U.S.C. 3701 et seq. and other titles) – SBA must obtain your taxpayer identification number when you apply for a loan. If you receive a loan, and do not make payments as they come due, SBA may: (1) report the status of your loan(s) to credit bureaus, (2) hire a collection agency to collect your loan, (3) offset your income tax refund or other amounts due to you from the Federal Government, (4) suspend or debar you or your company from doing business with the Federal Government, (5) refer your loan to the Department of Justice, or (6) foreclose on collateral or take other action permitted in the loan instruments.



**Paycheck Protection Program
Borrower Application Form Revised June 24, 2020**

Right to Financial Privacy Act of 1978 (12 U.S.C. 3401) – The Right to Financial Privacy Act of 1978, grants SBA access rights to financial records held by financial institutions that are or have been doing business with you or your business including any financial institutions participating in a loan or loan guaranty. SBA is only required provide a certificate of its compliance with the Act to a financial institution in connection with its first request for access to your financial records. SBA's access rights continue for the term of any approved loan guaranty agreement. SBA is also authorized to transfer to another Government authority any financial records concerning an approved loan or loan guarantee, as necessary to process, service or foreclose on a loan guaranty or collect on a defaulted loan guaranty.

Freedom of Information Act (5 U.S.C. 552) – Subject to certain exceptions, SBA must supply information reflected in agency files and records to a person requesting it. Information about approved loans that will be automatically released includes, among other things, statistics on our loan programs (individual borrowers are not identified in the statistics) and other information such as the names of the borrowers (and their officers, directors, stockholders or partners), the collateral pledged to secure the loan, the amount of the loan, its purpose in general terms and the maturity. Proprietary data on a borrower would not routinely be made available to third parties. All requests under this Act are to be addressed to the nearest SBA office and be identified as a Freedom of Information request.

Occupational Safety and Health Act (15 U.S.C. 651 et seq.) – The Occupational Safety and Health Administration (OSHA) can require businesses to modify facilities and procedures to protect employees. Businesses that do not comply may be fined, forced to cease operations, or prevented from starting operations. Signing this form is certification that the applicant, to the best of its knowledge, is in compliance with the applicable OSHA requirements, and will remain in compliance during the life of the loan.

Civil Rights (13 C.F.R. 112, 113, 117) – All businesses receiving SBA financial assistance must agree not to discriminate in any business practice, including employment practices and services to the public on the basis of categories cited in 13 C.F.R., Parts 112, 113, and 117 of SBA Regulations. All borrowers must display the "Equal Employment Opportunity Poster" prescribed by SBA.

Equal Credit Opportunity Act (15 U.S.C. 1691) – Creditors are prohibited from discriminating against credit applicants on the basis of race, color, religion, national origin, sex, marital status or age (provided the applicant has the capacity to enter into a binding contract); because all or part of the applicant's income derives from any public assistance program; or because the applicant has in good faith exercised any right under the Consumer Credit Protection Act.

Debarment and Suspension Executive Order 12549; (2 CFR Part 180 and Part 2700) – By submitting this loan application, you certify that neither the Applicant or any owner of the Applicant have within the past three years been: (a) debarred, suspended, declared ineligible or voluntarily excluded from participation in a transaction by any Federal Agency; (b) formally proposed for debarment, with a final determination still pending; (c) indicted, convicted, or had a civil judgment rendered against you for any of the offenses listed in the regulations or (d) delinquent on any amounts owed to the U.S. Government or its instrumentalities as of the date of execution of this certification.