

# Luca Chun Lun Lit

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## EDUCATION

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Dartmouth College, Hanover, NH

June 2021

- **Mathematics, Computer Science, B.A.** **GPA: 3.95 / 4.00**
- **Honors:** Summa Cum Laude (**Top 5%**), Phi Beta Kappa, Rufus Choate Scholar, Presidential Scholar, Neukom Scholar
- **Relevant Coursework:** Data Structures and Algorithm, Software Systems Design, Full-Stack Web Development, Machine Learning, AR/VR, Natural Language Processing, Linear Algebra, Probability Theory, Statistical Modelling

## WORK EXPERIENCE

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Appian Corporation (Low-Code Software Enterprise)

Sep 2021 – Present

**Software Engineer II (MLOps)**

- Built & maintained a FastAPI application in **Python** to support custom machine learning model training and deployment. Delivered feature in <1 year, onboarding 20+ new enterprise customers, increasing Appian software adoption by 10%.
- Implemented 30+ unit & integration tested endpoints for uploading datasets & running ML model training +inference. Containerized the app using **Docker**, and deployed it using **ArgoCD**. Provisioned and managed **Gitlab pipelines** to automate CI/CD, setup a monitoring and alerts system using **Prometheus**, and added **Jaeger** tracing to backend services.
- Optimized file upload by parallelizing calls to **AWS S3**, reducing latency for 200 concurrent file uploads - from 10 to 5s. Reduced inference completion time by 85%, by migrating AWS Batch Transform to **Kubernetes** jobs.
- Reduced API latency for training + inference endpoints by 70%, by implementing an asynchronous processing system using 1) **AWS SQS** to queue tasks and 2) **K8s Operators** to autoscale jobs for processing those compute-intensive tasks. Also owned end-to-end implementation of a file retention system using the same queueing mechanism.
- Provisioned AWS cloud services backing the API's persistent metadata storage, secure file storage and ML model training using **Terraform** (i.e. **DynamoDB**, **S3**, **KMS**, **Sagemaker**, **SQS**). Created scheduled Gitlab CI pipelines to clean up unused AWS resources, reducing company costs by \$8700 / month.

Keystone Strategy (Strategy & Tech Consulting Firm)

Jun 2021 – Sep 2021

**Data Science Intern**

- Pre-processed 170,000+ rows of customer service data using **numpy** + **pandas**, and trained a deep learning NLP model to outperform a formerly employed 3<sup>rd</sup> party software, increasing prediction accuracy from 89% to 98.6%.
- Trained proprietary ML model to predict precise repair solutions to defected home appliances using textual data (~ 800 lines of **Python** code). Increased company valuation by ~ 30%, to \$200 million, in preparation for M&A considerations.

Harmonize (HR Management Software Startup)

Jul 2020 – Sep 2020

**Data Science Intern**

- Developed a logistic regression model to forecast customer churn using **Python** and **SQL**. Devised renewal strategies for the marketing team using customer segmentation analysis. Increased retention rate by ~20% in the subsequent year.
- Automated a script using **Selenium** to scrape product reviews from review platforms, reporting 20+ bugs and defects.
- Worked with engineering team to enhance automated chatbot features, boosting product adoption by 22% in 3 months.

## RESEARCH + PROJECTS

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StoryCloud IO (Social Media Mobile App)

Jun 2023 – Present

**Founding Engineer**

- Co-founder and solo backend developer for an AI-assisted story-telling app. Deployed a **Docker**-containerized FastAPI application with 40+ integration-tested RESTful endpoints, using **AWS ECS** with **Fargate Spot** instances.
- Integrated endpoints with AWS cloud services, including DynamoDB, SQS, S3, **Lambda**. In addition, setup an **Application Load Balancer** for traffic distribution, and used **CloudFront** to enable request caching on GET operations.

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**Technical:** Python, Terraform, Git, AWS SDK, YAML, C#, HTML/CSS, Linux, Docker, Kubernetes

**Certifications:** AWS Certified Developer