NICHOLAS **NHIEN**

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Education

University of California, Los Angeles (UCLA)   *Graduated Jun. 2024*
Computer Engineering B.S, Philosophy B.A.
GPA: 3.7, **Engineering Dean's Honors, Philosophy Departmental Honors, Upsilon Pi Epsilon Member**
Selected Engineering Coursework: Graduate Queueing Theory, Graduate Neural Networks & Deep Learning, Parallel and Distributed Computing, Embedded Networked Systems, Programming Languages, Digital Signal Processing

Experience

Apple   *Jun. 2023 – Sept. 2023*
Software Engineering Intern
Golang, Python, DevOps, Kubernetes, C, Real-time programming, Espressif IoT Development Framework, GCP, SQL, mTLS
- Imagined and made reality an end-to-end solution combining a delightful interface, a quick backend service architecture integrating multiple data sources, and a robust firmware for a resource-constrained IoT device to gamify visibility of crucial DevOps project velocity metrics for high-level Apple Pay engineering managers
- Mastered industry-standard security tools and navigated internal compliance processes to keep sensitive data private
- Collaborated with internal cross-functional contributors and hardware partner to internationally deploy devices at end of 12-week timeline

Daily Bruin: bruinwalk.com   *Oct. 2020 – Jun. 2024*
Director
Django, Kubernetes, Prometheus, Grafana, Python, React, JSX, REST, git, PostgreSQL, Elasticsearch
- Spearheaded cloud infrastructure migration to Kubernetes cluster resulting in dramatic cost savings and over 99.9% uptime for professor and course review site relied on by over 93% of UCLA undergraduate body during enrollment
- Established a DevOps group to accelerate software delivery and create incident visibility during outages by integrating the codebase with a CI pipeline and providing Grafana dashboards of system statuses backed by Prometheus
- Reverse-engineered student registrar portal to provide course and professor ratings as well as grade distributions in an elegantly designed browser extension available on Chrome and Firefox

TabaPay   *Jun. 2022 – Feb. 2023*
Software Engineering Intern
Golang, Python, Excel, ISO 8583, Visa & Amex Authorization Messages, Discover Sales Data Interface
- Created auditing tool enabling generation of more than $1 million in additional revenue year-over-year from fast-growing fintech startup's largest client; learned Golang in less than one week to accomplish task
- Built beautiful invoicing solution to empower large fintech innovators to break down network fees, processing fees, and interchange associated with monthly transactions
- Developed core utilities that translate >100k of Visa-spec ISO 8583 messages to Discover-spec clearing data daily, as well as perform end-to-end money movement on the Amex network

Projects

Bomb Go Boom
Python, OpenCV, Speech recognition, Bluetooth Low Energy, IMU, Arduino framework, Panda3D, Blender
- Recreated popular game *Keep Talking and Nobody Explodes,* incorporating peripheral hardware controller, speech and IMU-backed gesture recognition, and computer vision-powered localization.

Convolutional Neural Network on CUDA
C++, CUDA, AWS, High-performance computing, GPU architecture
- Applied high-performance and parallel computing techniques to realize **486 GFLOPs** of throughput on NVIDIA Tesla M60 running a CNN containing bias, convolution, and maxpool layers programmed in CUDA C.

Deep Learning Library
Python, NumPy, Backpropagation, Neural networks
- Implemented with NumPy a TensorFlow-like interface to construct neural networks, complete with linear, convolutional, maxpool, and dropout layers plus trainability with backpropagation.

Skills & Interests

C/C++, CUDA, Prometheus, Grafana, machine learning, deep neural networks, high-performance computing, GPU architecture, CPU architecture, embedded systems programming, cloud computing, computer networking, DevOps, Python, Java, Django, React, JavaScript, REST, Docker, Kubernetes, git, SQL, Linux, FreeBSD, nginx, Android SDK, Golang, Elasticsearch, shell scripting, Kotlin, MIPS, OpenMP, Node.js, AWS, teaching, writing, public speaking, customer service, strategic planning
Philosophy, public transit, anime, music, coffee, hiking & camping, photography, public policy, basketball, gaming