KYLE NAKAMURA

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CAREER PROFILE

Results-driven Full Stack Developer with 7 years of experience and an M.S. in Computer Science, specializing in Machine Learning. Expertise in full-stack development and data-centric engineering, with a proven track record of launching greenfield projects and delivering user-friendly applications. Dedicated to continuous learning through mentorship and active contributions to side projects, including the overhaul of the open-source mlrose-ky package.

KEY SKILLS

Professional:	Project Management, Junior Staff Leadership, Agile/Scrum, Technical Problem Solving
Software Dev.:	Full-Stack Development, Angular, React, SvelteKit, TypeScript/JavaScript, PHP, HTML, SCSS, Rapid Prototyping, Code Quality Maintenance, Technical Documentation, CI/CD, Docker
ML & Technical:	Python, TensorFlow, PyTorch, Scikit-learn, NumPy, Pandas, Matplotlib, NLP/LLMs, Database Management & Optimization (MySQL), Version Control (Git, GitHub), Linux/Unix, Cloud Services (AWS, GCP, Azure), RESTful APIs

EDUCATION

Master of Science in Computer Science (Machine Learning) **08/2021 – 05/2024**
Georgia Institute of Technology, Atlanta, GA

Key Coursework: Machine Learning, Graduate Algorithms, Computer Vision, Computational Photography, AI Ethics

Bachelor of Science in Computer Science (Minor in Mathematics) **08/2014 – 05/2018**
Azusa Pacific University, Azusa, CA

CAREER HISTORY

Freelance Full-Stack Web Developer **01/2023 – Present**
GeekOffice, LLC., Los Angeles, CA

- Spearhead diverse web development projects, transforming startup visions into branded design solutions.
- Directly engage clients to define requirements and guide them on feasible, budget-aligned strategies.
- Drive project implementations and foster transparent communication to build lasting client trust.
- Craft responsive web designs using advanced tools like Angular and SvelteKit, plus innovative CSS techniques.
- Seamlessly integrate APIs to build dynamic real-time applications, handling continuous data flow efficiently.

GeekOffice Project: Collaborated with diverse team to design a showcase website for our company.
HyCite Project: Partnered with a web designer to build a corporate website using Angular and Dato CMS.
Design2Text Project: Leveraged SvelteKit and OpenAI API to convert Figma designs into requirement docs.
WHIP Cars Project: Created an intuitive load management app for auto transport using SvelteKit and Supabase.
Shiftwell Project: Engineered a shift scheduling application for restaurant managers using SvelteKit and Firebase.

Full-Stack Web Developer **05/2017 – 06/2022**
Azusa Pacific University, Azusa, CA

- Led front-end development to launch the university web portal, enhancing functionality with PHP, CSS, and JS.
- Collaborated on backend development, integrating databases and APIs to improve system architecture.
- Engineered a web-based DB interface and developed helper functions to enable secure SQL queries.
- Integrated analytics for strategic insights, managed iOS app (Swift), and reduced API costs by $180/m (90%).
- Launched a CV occupancy monitoring system and a video streaming service with attendance tracker.
- Mentored junior developers, overhauled the legacy codebase, and established a detailed wiki.

PROJECTS

Open-Source Python Package for ML Engineering **06/2024 – Present**
GitHub | PyPi.org

- Forked and refactored 10,000+ lines of code in the mlrose-hiive repository for better quality and maintainability.
- Added tests using Pytest, boosting code coverage from 5% to over 88%, ensuring robust functionality.
- Improved documentation with detailed docstrings and modern type hints for better accessibility and usability.
- Fixed critical bugs and optimized performance through NumPy vectorization and algorithm optimizations.
- Continuing to increase test coverage and optimize performance, ensuring long-term maintainability.

ML Dataset Preprocessing Toolkit **08/2023 – 07/2024**
GitHub

- Created a versatile Python toolkit for seamless dataset preparation from various sources, including Huggingface, UCI ML Repository, and local files.
- Automated common data preparation tasks like encoding, scaling, normalizing, and sampling data.
- Developed an image-to-tabular conversion pipeline for image-based datasets, utilizing advanced resizing techniques to preserve aspect ratios and enhance downstream ML performance.
- Added features for class balancing and feature engineering, significantly boosting the efficiency of ML model training across diverse dataset formats.

Funded Project: Real-Time Campus Parking Lot Occupancy System **01/2018 – 08/2018**
Azusa Pacific University

- Collaborated with a classmate under the mentorship of an AI professor to develop a computer vision-based system that monitors campus parking lot occupancy in real-time.
- Created a 3D model of the campus parking lot in Unity, generating a synthetic dataset of images to train a Convolutional Neural Network (CNN) using TensorFlow.
- Deployed the model and Flask API to the cloud, processing live video feeds from IP cameras to provide real-time occupancy data to the frontend interface I developed.
- Successfully implemented a cost-effective solution that helped students and faculty find parking efficiently, demonstrating practical ML applications on campus.