Lawrence Lu

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EXPERIENCE

AI Assistant Engineer Intern | ADLINK Technology | Taoyuan, Taiwan   Jun '24 - Sep '24

- Migrating application backend to FastAPI and REST, improving modularity and API maintainability
- Building a PDF OCR and table extraction pipeline via Tesseract and parsing modules for LLM readability
- Leveraging LLMs to create a RAG application that optimized device information retrieval efficiency by about 50% - 60%
- Constructing a multi-agentic ReAct RAG system for multi-modal retrieval and ML tool usage

Augmented Reality Instructor | Integem | Irvine, CA   Jun '23 - Aug '23

- Instructing 100+ K-12 students in Python programming and applied AI through custom hands-on projects
- Guiding students through AI model training workflows and edge development using AIY Vision Kit (Google) and Jetson Nano (Nvidia)

Development Science Informatics AI/Analytics Intern | Genentech | South San Francisco, CA   Jun '22 - Sep '22

- Mining datasets with 100+ variables in R and benchmarked regression machine learning models to predict disease biomarkers
- Building an internal documentation website for machine learning tools, improving accessibility and team workflow efficiency by ~50%
- Developing Python image preprocessing pipelines to prepare datasets for deep learning model training

EDUCATION

B.S in Computer Science (Specialization in Intelligent Systems), Minor in Statistics | UC Irvine, CA   Class of 2025

- Languages: Python Programming and Libraries (Accelerated) | Intermediate Programming (Python) | Programming in C/C++ as a Second Language | Data Structure Implementation and Analysis (C++) | Concepts in Programming Languages (C++/Java/Lisp/Prolog)
- Logic: Introduction to Artificial Intelligence | Discrete Mathematics for Computer Science | Boolean Algebra & Logic | Introduction to Probability and Statistics for Computer Science | Introduction to Linear Algebra | Multivariable Calculus
- Theory: Introductory Computer Organization | Critical Writing on Information Technology | Software Testing, Analysis, and Quality Assurance | Introduction to Software Engineering | Human-Computer Interaction | Design and Analysis of Algorithms | Information Retrieval | Machine Learning and Data-Mining | Principles in System Design | Formal Languages and Automata | Algorithms for Probabilistic and Deterministic Graphical Models | Introduction to Optimization | Statistical Methods for Data Analysis | Introduction to Probability and Statistics | Introduction to Data Management | Neural Networks and Deep Learning
- Corporate Outreach Committee Staff | ICSSC Club (Nov 2022 - June 2023)

PROJECTS

Emotion Classification from Children's Drawings [Education Support]

- Implemented transfer learning by fine-tuning Resnet-50 (Microsoft) and Vision Transformer (Google) on a labeled children's drawing dataset (Kaggle)
- Reached ~60% classification accuracy despite limited training data challenges through semi-supervised learning

Reinforcement Learning Agent for Minecraft Parkour [Robotics & Autonomy]

- Built an RL training pipeline using Project Malmo, implementing DQN and Tabular Q-learning to enable policy learning across varying parkour room configurations
- Achieved sub-5 second completion time on a 4-jump obstacle course in best-performing runs

Datathon Project: "Montreal Hockey Shoots into Crime" [Public Safety Planning]

- Investigated correlations between crime rates and hockey game events in Montreal using a structured crime dataset
- Placed 2nd overall in the datathon, achieving the "Runner Up" award

SKILLS

Programming Languages:			Tools:		Soft skills:	
- Python	- C++	- C	- Pytorch	- Numpy	- Teamwork	- Creativity
- Java	- R	- Lisp	- Pandas	- Git	- Communication	- Adaptability