Lawrence Lu

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EXPERIENCE

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

- Refactoring application backend to FastAPI and RESTful API structure
- Parsing/extracting content from PDFs via Tesseract and table manipulation modules
- Leveraging LLMs to create a RAG application that optimizes device information retrieval by about 50% - 60%
- Constructing a multi-agentic RAG LLM with ReAct logic for multi-modal retrieval and ML model tool usage

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

- Teaching a total of 100+ students Python programming and Artificial Intelligence model building
- Guiding students in training AI models for custom projects using Google's AIY Vision Kit and Nvidia's Jetson Nano

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

- Building a documentation website to enhance the workflow efficiency and accessibility of the team's machine learning tools by ~50%
- Data mining datasets consisting of 100+ independent variables using R to determine the best fit machine learning regression model for predicting disease biomarkers
- Developing python scripts for preprocessing image data prior to deep learning model training

EDUCATION

B.S in Computer Science, Minor in Statistics | University of California, Irvine | 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)
- Awards: Dean's Honor List

PROJECTS

Finetuned Pre-trained Deep Learning Models to Predict Emotions from Amateur Drawings

- Finetuned Microsoft's Resnet-50 and Google's Vision Transformer models on a labeled children's drawing dataset found on Kaggle
- Scored ~60% accuracy despite challenges with minimal training data

Trained Reinforcement Learning Agent to Parkour in Minecraft

- Integrated Project Malmo with Deep and Tabular Q-learning to train an agent on varying parkour rooms
- Achieved sub-5 second completion time for a 4-jump obstacle course for our best run

Analyzed the Data Project "Montreal Hockey Shoots into Crime"

- Investigated the rate of crime after a hockey game in Montreal using a provided pre-cleaned crime dataset
- Won 2nd overall in Datathon, achieving the "Runner Up" award

SKILLS

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