

Loc Vu

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EDUCATION

University of California, San Diego

San Diego, CA

Bachelor of Science in Computer Science

Sept. 2018 – June 2022

- **Courses:** Supervised/Unsupervised Learning, Deep Learning, Probability and Statistics, Linear Algebra

TECHNICAL SKILLS

Languages: Python, SQL (MySQL), C/C++, Java

Frameworks: PyTorch, Tensorflow, scikit-learn, LangChain, FastAPI

Developer Tools: Git, VS Code, PyCharm, Jupyter Notebook

Libraries: Pandas, NumPy, Matplotlib, Plotly, Ollama

EXPERIENCE

Software Engineer

April 2022 – Present

Intel

Santa Clara, CA

- Leading as sole software developer on team of >30 hardware engineers handling all **automation** requests
- Reduced average Power Integrity analysis time by 50% with end-to-end **Python applications**
- Generated interactive heatmaps from voltage drop data of PI simulations using **Plotly**
- Implemented a **DBSCAN** clustering model to identify and mitigate high RF interference areas in layout designs
- Explored ways to implement **RAG** system for white paper summarization
- Hosted quarterly learning sessions on **ML/AI** averaging 25+ participants

Data Science Intern

June 2020 – July 2021

WithHealth

San Diego, CA

- Collected medical papers through PubMed Central API using **request**
- Updated **MySQL** schema to store genetic information from papers extracted using **beautifulsoup**
- Created rudimentary **recommender system** to suggest relevant medical papers based patient medical history

Research Assistant

Sept. 2019 – Sept. 2021

Halcioğlu Data Science Institute

San Diego, CA

- Analyzed >23 terabytes of PC time series data to understand user habits
- Developed framework for measuring similarities within a user's day-to-day habits
- Concluded that >76% of PC users show very similar day-to-day usage habits

System Energy Efficiency Lab

San Diego, CA

- Worked on implementation of **Hyperdimensional Computing(HD)** as alternative to deep neural networks
- Created a Raspberry PI line-following rover to collect line angle and image data using **Python** and **OpenCV**
- Implemented **linear regression** and **SVM** models to predict line-angle from images using **scikit-learn**, found HD model performed 3-8x faster in training and predicting

PROJECTS

DocRAG | *Python, Ollama, LangChain, Streamlit*

- Created local QnA **RAG** chatbot to query large documents using **Ollama** and **LangChain**
- Implemented a user interface for uploading context documents and store conversation history with **Streamlit**

TextGen | *Python, Pytorch, Tensorflow*

- Implemented a decoder **Transformer** model architecture from scratch trained to generate text in the style of input documents using **PyTorch** and **Tensorflow**

YouTube Classifier | *Python, Tensorflow, Jupyter Notebook*

- Led team to explore **scikit-learn** models in classifying YouTube video genre from titles
- Developed template **Jupyter Notebook** to guide team members in preprocessing data and training models
- Achieved an **accuracy** score of 98% and an **F1** score of 97% using linear SVM model
- Explored YouTube title generation with simple Tensorflow **LSTM** model