VIDITH BALASA

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EDUCATION

Master of Science in Data Science, University of San Francisco — Jul 2023 - Jun 2024
Relevant Coursework: Machine Learning, Deep Learning, NLP, Time Series, Distributed Data Systems

Bachelor of Arts in Philosophy, University of California, Santa Cruz — Sep 2018 - Jun 2022

EXPERIENCE

Square — Oct 2023 - Jun 2024
Machine Learning Engineer – Intern — *Remote*

- Contributed to the generation of over **$100,000** in prospective revenue through the development and training of a light gradient boosting model on a dataset exceeding **100GB**, aimed at predicting local business lifetime value with heightened accuracy
- Enhanced performance of the existing lifetime revenue prediction pipeline by over 20% through strategic integration of Prefect 2 frameworks, streamlining deployment of ml models into production
- **Obtained shareholder approval** for production deployment by concisely presenting the model's monetary benefits

Siemens — May 2023 - Jul 2023
AI Engineer – Intern — *Remote*

- Deployed a cutting-edge **LLM** troubleshoot solution, achieving a **15% reduction in customer complaints** by enhancing the accuracy and response speed of our support systems
- Conducted comprehensive research on emerging deep learning and generative AI technologies, contributing to the ongoing integration of cutting edge technologies into the company's product offerings
- Effectively communicated complex project milestones and results to a broad range of high level executives

Divercity — Jun 2022 - Sep 2022
Machine Learning Engineer – Intern — *Remote*

- Ensured operational integrity of image recognition models deployed on **AWS**, maintaining uptime at a rate of 97% month-over-month
- Spearheaded the interview process and mentoring of two interns from a pool of over five candidates, playing a crucial role in their development and successful integration into key projects

PERSONAL ENDEAVORS

ScaleAI Hackathon Winner One of three top prize winners at the annual Scale AI hackathon. Built an LLM based molecular generation model that increases speed of drug discovery for chemical engineers. Fine tuned embedding models on SMILES notation to generate molecular substructure knowledge from plain text.

4 Bit CUDA Kernel Built a set of CUDA kernels that allows for quantized 4 bit tensor operations on an Nvidia GPU. Nvidia doesn't currently have any native kernels that allow for 4 bit computation, so I decided to build my own. (GitHub Repository)

Fog City Rocketry Officer for fog city rocketry club. Built a 3D printed rocket with a custom H-class solid fuel engine that reached 10,000 feet. Worked on IMU and flight computer algorithms.

SKILLS

Languages	Python, C, C++, SQL, Javascript/Typescript, HTML, CSS
Frameworks	PyTorch, CUDA, TensorFlow, Scikit-learn, Pandas, Numpy, Flask, React
Database Tools	Spark, MySQL, PostgreSQL, MongoDB, Redis, Firebase, BigQuery
Misc	git, vim, nvcc, Docker, Amazon Web Services (AWS), Airflow, Prefect