

Abhinav Uppala

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EDUCATION

University of California, Irvine

Irvine, CA

Bachelor of Science - Computer Science

2023 - 2027

- GPA: 3.7/4.0, Dean's Honor List, Undergraduate Research

PROFESSIONAL EXPERIENCE

Applied ML Research Intern

Aug. 2024 - Present

UC Irvine Health SciTech Group

Irvine, CA

- Developed a modular data pipeline for preprocessing, analyzing, and visualizing various types of data, enhancing data accessibility and insights for research projects.
- Improved research efficiency by integrating an LLM-based healthcare agent to automate data handling workflows via natural language prompts, simplifying data engineering for researchers.

Coding Instructor

Jan. 2023 - Aug. 2023

Code Ninjas

Folsom, CA

- Mentored over 200 students in game development curriculum, teaching new concepts, and assisting debugging.
- Taught programming concepts in languages such as Python, JavaScript, Unity/C#, Lua, and Scratch.
- Facilitated Python Club, which taught 10+ students competitive programming concepts in Python.

Software Engineering Intern

June 2022 - Aug. 2022

Intel Corporation

Folsom, CA

- Developed a system management portal using Python, consolidating diagnostics for over 100 test benches running benchmarking software in more than 5 Intel offices across the U.S., improving system monitoring efficiency.
- Built a command-line version allowing for future automation, such as auto-rebooting systems upon crashing.

PROJECTS

TelescopeML [↗](#) | *Tensorflow, Scikit-learn, Streamlit, Pandas, Numpy*

- Implemented unsupervised learning techniques with PyTorch to cluster & analyze brown dwarf spectra.
- Developed Streamlit web demo showcasing models, allowing users to train, visualize, upload & save each model.
- Contributed to open-source project [TelescopeML](#) [↗](#) as an alternative to existing CNN model, in a 1 week deadline.

Crop Guard [↗](#) | *React.js, FastAPI, PostgreSQL, TypeScript, Next.js, PyTorch, Tailwind*

- Collaborated on fullstack web app that classifies plant diseases given an image using a fine-tuned ResNet, and provide users with descriptions & treatments for these diseases with Google's Gemini-1.5 LLM.
- Implemented user login and data visualization from prior prompts, revealing long-term plant disease trends.

Diffusion Emoji Generator [↗](#) | *React.js, FastAPI, TypeScript, Next.js, PyTorch, Tailwind*

- Developed a full-stack web app with a team of 4 to generate custom emoticons from a written prompt.
- Tuned diffusion model on 3k+ emojis, iteratively removing noise from an image until it resembles the prompt.

Song Hangman [↗](#) | *Flask, JavaScript, Bootstrap, HTML/CSS*

- Deployed fullstack web app where users can play hangman with songs from chosen artists using Spotify's web API.
- Implemented responsive UI and utilized cookies to cache API results for over 80% faster load times.

SKILLS

Programming Languages: Python, JavaScript, C++, TypeScript HTML/CSS, SQL

Frameworks: React.js, FastAPI, Amazon Web Services (AWS), Docker, AWS DynamoDB, AWS ECS/EC2, PostgreSQL, Next.js, Git, Tailwind, PyTorch, TensorFlow, pandas, numpy, Flask, BeautifulSoup, APIs, LLMs

ABOUT ME

Interests: Video Games, Cooking, Music, Weightlifting, Traveling