

Abhi Vetukuri

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EDUCATION

CORNELL UNIVERSITY - GPA: 3.94/4.0 (Dean's List)

Ithaca, NY

BS - Computer Science & Operations Research and Information Engineering (Rosenfeld/Ilgen Scholarship)

May 2025

Course Work: OOP & DSA, Machine Learning (Grad Level), Statistics, Calc 3, Linear Algebra, Discrete Math, Optimization

SKILLS

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

Libraries: React, Node.js, PyTorch, TensorFlow, OpenCV, Spark, Kafka, Pandas, Scikit-Learn, NLTK

Technologies: AWS, Azure, Docker, Kubernetes, MongoDB, Terraform, PostgreSQL, Django, Streamlit, GraphQL, NestJS

Interests: AI, Deep Learning, NBA Basketball, Formula 1, Poker, Bowling, Gaming, Spanish, DC Comics

PROFESSIONAL EXPERIENCE

CORNELL CENTER OF ADVANCED COMPUTING (CAC)

Ithaca, NY

Cloud Engineer

Aug 2023 – Present

- Developing automated **AWS cloud HPC cluster** for climate simulations using **WRF**, **Kubernetes**, and **Terraform**
- Accelerating simulations **5x** by scaling to **500+** cores on demand, reducing typical WRF run times from weeks to days.
- Automated end-to-end workflows for **cluster deployment**, job execution, and **S3** data storage using **Pulumi** and **Singularity** containers with **MPI**, enabling cost-optimized execution of WRF climate simulations in the cloud

FIDUCIA AI

San Ramon, CA

Full-Stack Software Development Intern

May 2023 - Aug 2023

- Implemented a **sentiment analysis** application for their platform using **MongoDB**, **Express**, **Angular**, and **Node**, increasing engagement by **40%** for **1k+** users by providing real-time **NLP insights** and business strategy improvements
- Leveraged **BERT** and **OpenAI API** for NLP analysis reducing costs by **60%** and improving accuracy by **10%** over previous solutions, then containerized app with **Kubernetes** on **AWS EKS**, reducing infrastructure costs by **20%**
- Built pipelines for model training and evaluation using **Arflow**, accelerating experiment iteration; designed test automation framework with **Cypress**, increasing test coverage to **40%** and reducing regressions

INNAVATE

Fremont, CA

Software Engineer Intern

Jan 2023 - Jun 2023

- Architected reactive and scalable **microservices** for property management applications, utilizing **NestJS**, **Node.js**, **MongoDB**, and **GraphQL**, reducing server response times by **20%** and decreasing latency by **15%**
- Made data analytics **dashboards** leveraging **Elasticsearch** and **Kibana**, increasing actionable insights by **30%**
- Worked with **CI/CD pipelines** to deploy features to **AWS** including **EC2**, **S3**, and **Lambda**, decreasing release cycles **20%**
- Migrated legacy codebase into **Docker containers**, orchestrated with **Kubernetes** on **AWS**, improving performance **25%**

CORNELL AUTONOMOUS SAILBOAT TEAM

Ithaca, NY

Software Engineer

Oct 2022 - Current

- Developed and trained a high-performance autonomous navigation agent using **Google's DDPG** deep reinforcement learning algorithm through **Python**, using libraries such as **PyTorch** and **OpenAI Gym** on **Ubuntu Linux** environment
- Engineered training env for **RL models** using **ROS/Gazebo**, to accelerate iteration and reduce validation time by **30%**
- Implemented **EKF** and **weighted averaging** to integrate GPS, IMU, wind data, improving state estimation accuracy **15%**

PROJECTS

SPOTIFY STATS TRACKER | React, Styled Components, Spotify API, Express, Node, Heroku

Aug 2022 - Dec 2022

- Created **web app** for visualizing account data, can view your top artists, tracks, personalized music recommendations
- Generated **responsive UI** with **ReactJS** and **Material-UI** for seamless experience across devices; leveraged **ExpressJS** for server-side logic and **Spotify API** for secure data retrieval, then deployed application with **Heroku**

MEDICAL ASSISTANT AI | Azure, Streamlit, Django, ChromaDB, OpenAI API, Langchain

Feb 2023 - May 2023

- Built medical app powered by **Langchain** agents and **GPT-4** to deliver medically accurate medical advice to users
- Utilized **Streamlit** for frontend, **Django** for auth/secure access, **ChromaDB** vector database for efficient query/context retrieval and storage of web scraped data, then deployed app in **Azure** using services such as **App Service/Insights**