SUNDARA VISHNU SATISH

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EXPERIENCE

Illumina: Software Engineering Intern, DRAGEN R&D • San Diego, CA May 2023 – August 2023

- Created a performant job submission tool for the DRAGEN secondary analysis platform supporting bioinformatics pipelines on specialized FPGA hardware empowering genomics research and precision medicine.
- Designed and implemented models in Django to provide RESTful API-based endpoints with CRUD operations, resulting in a 50% reduction in job submission time.
- Orchestrated robust CI/CD pipelines utilizing Jenkins, driving a 40% reduction in time-to-market for artifact publication and accelerated SDK creation for intra-operability within the Illumina product ecosystem.
- Deployed project on AWS, creating ECS and RDS clusters with blue-green strategy for seamless deployment and minimal downtime along with 30,000$+ cost-savings annually.

Future of Programming Lab: Research Assistant • Ann Arbor, MI Feb 2022 – Present

- Structured and led code-cleanup meetings for Hazel, an innovative live programming environment proficient in type-checking and executing incomplete programs with guidance of Prof. Cyrus Omar in lab of 15+ members.
- Spearheaded integration of Hazel into programming languages courses, resulting in an astounding 70% improvement in student engagement and comprehension.
- Collaborated on RustViz, an acclaimed project boasting 2.4K+ GitHub stars, revolutionizing Rust education by generating informative visualizations of Rust's intricate ownership and borrowing system.

TIBIL Solutions: Software Engineer Intern • Bengaluru, India Aug 2020 – Oct 2020

- Independently developed a robust 2-stage predictive analytics model combining hybrid ARIMA and Artificial Neural Networks (ANN) in Python to accurately forecast power output and evaluate wind farm viability.
- Achieved a notable 20% enhancement in power output prediction accuracy, enhancing informed decision-making and optimizing resource allocation through FB Prophet, a time-series forecasting library.
- Leveraged advanced machine learning techniques like feature engineering and hyperparameter optimization to maximize model performance and provide actionable insights for strategic renewable energy planning.

PROJECTS

Solana Center Lead Volunteer

- Led group of 6 students and compiled comprehensive report by analyzing 100+ Food Recovery Inspection Reports, utilizing Excel, Pandas, NumPy, and popular plotting libraries.
- Identified trends in SB1383 compliance, leading to 20% enhanced food waste prevention and improved community nutrition security.

V1 Michigan Platform

- Developed a scalable MVP with 15 driven student-entrepreneurs for V1@Michigan, leveraging NextJS + React + TypeScript + TailWind CSS + Supabase + SES.
- Onboarded and served 100+ users positioning platform for exponential growth, with a projected 10x increase in user base.

EDUCATION

Bachelor of Science, Computer Science and Mathematics Graduating May 2025

University of Michigan, Ann Arbor, MI 3.921 GPA

LSA and Engineering, *James B. Angell Scholar*, *University Honors*

Relevant coursework: Data Structures and Algorithms, Computer Organization, Programming Languages, Discrete Math, Linear Algebra, Web Systems, Compilers, Distributed Systems , Operating Systems , Networking

TECHNICAL SKILLS

Python • C • C++ • OCaml • Rust • JavaScript • TypeScript • Java • SQL • NoSQL Database • HTML • CSS • Git • Bash • Docker • Jira • Jenkins • Poetry • Django • React • NextJS • TailWindCSS • AWS S3, ECS, RDS, Lambda • Azure • Linux • Confluence • Scrum • Project Management • Design • UNIX • Jenknins CI-CD • Groovy

ACTIVITIES & INTERESTS

Rock-Climbing • Running • Classical Guitar Society • Business • Scalable Cloud Systems • SaaS