

SUDHANSHU KULKARNI

Software Developer

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San Francisco, CA

EDUCATION

- May 2024 **MS - Computer Science**, San Francisco State University
High Performance Computing, Quantum Computing, Data Mining, Software Engineering
- April 2020 **BE - Computer Engineering**, International Institute of Information Technology (SPPU)
Machine Learning & AI, Data Analytics, Cloud Computing, Cyber Security

EXPERIENCE

- Sept '23 - present
Nov '22 - May '23 **Research Assistantship - SAN FRANCISCO STATE UNIVERSITY**, San Francisco, CA
- Research in the High-Performance Computing domain with the Office of Research and Sponsored Projects at SFSU.
 - Studying the feasibility of performing scalable FFT computations "in situ" on HPC platforms for the purpose of supporting scientific data analysis workloads in exascale [NERSC](#) projects.
 - Collaborations with scientists at [Lawrence Berkeley National Laboratory](#) for active research on Perlmutter, an HPE Cray EX supercomputer, achieving at least 10x speedup in computation time compared to traditional methods.
- C++ Python High-Performance Computing SENSEI Open Source Scientific Computing
- May 2023 -
August 2023 **SDE Intern - AMAZON WEB SERVICES**, Seattle, WA
- Designed and developed an enhanced monitoring agent to be deployed on thousands of live servers worldwide as a part of the AWS CloudFront CDN services' platform team.
 - Prototyped a robust and lightweight service to ensure timely capturing and reporting of critical metrics, guaranteed to enhance service reliability by at least 10% after full-fledged deployment on AWS servers across the world.
 - Created live dashboards to provide real-time visibility into at least 70% of all the agents running on servers, improving the team's ability to maintain reliability and diagnose potential issues.
- Python Server-side scripting Dashboarding Scalable Development
- August 2020 -
July 2022 **Software Engineer - ELASTICRUN**, Pune, IN
- Core developer of in-house ERP system to manage large-scale logistics and B2B eCommerce platform and responsible for at least 20% of the entire development workload of the 'Velocity' segment of the company.
 - Worked on heavy Python-based server-side development and business-focused client-side scripting for progressive web apps, in an agile software development environment.
 - Contributed to creating an automated testing framework for faster bi-weekly software deployments with Kubernetes and CI/CD pipelines on GitLab, which improved reliability and rate of deployments by $\approx 15\%$.
- Python TypeScript Frappe Framework PWA SvelteJS Full stack Git CI/CD
- March 2018 -
July 2018 **IoT Specialist Intern - SCMIND LLC**, Princeton, NJ
- Building IoT-enabled supply chain machinery to deliver performance monitoring, breakdown predictions, and sensor-based usage analytics on low-level Raspberry Pi microprocessor hardware.
 - Designed an end-to-end solution from the microprocessor to analytics dashboard, after careful evaluation of different cloud platforms like AWS, Microsoft Azure, IBM Watson, and Google Cloud Platform.
- Python IoT Supply Chain PowerBI Microsoft Azure Raspberry Pi

SKILLS

Languages Python, C/C++, Java, TypeScript, Javascript, SQL, HTML/CSS, bash
Frameworks Frappe, Django, Flask, SvelteJS, NodeJS.
Tools Git, Tensorflow, Keras, AWS, GCP, Docker/Kubernetes, nginx, Power BI

NOTABLES

- Early career conference committee and review member for [ISAV workshop at The International Conference for High-Performance Computing, Networking, Storage, and Analysis, 2023](#) (SC23).
- Speaker at ISAV '23 workshop for a lightning talk on Scalable FFT project research at Denver, CO.
- Contributor in the Open Source [SENSEI Project](#) as a new FFT analysis backed endpoint.
- Prime contributor in GIS project that employed classification algorithms like Signal Matching and Neural Networks on multi-spectral and temporal satellite data. Technical collaboration with scientists from [Indian Space Research Organisation \(ISRO\)](#), [National Remote Sensing Center \(NRSC\)](#), India and [Geospatial Design Labs](#), India.