

HRUSHIKESH VAIDYA

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EDUCATION

University of Southern California

Master of Science, Computer Engineering

Research Assistant at the Adaptive Computing Experiences Lab (ACE)

August 2024 - May 2026

GPA: 4.0

EXPERIENCE

Adaptive Computing Experiences Lab

Research Assistant

October 2024 - May 2025

University of Southern California

- Developed SciSO – an end-to-end pipeline for extracting scientific citation graphs from StackOverflow, studying the dissemination of theoretical research and the impact of scientific citations on modern trends in software development
- Authored “SciSO: Mining Science in StackOverflow”, submitted to the Mining Software Repositories ’25 Conference
- Designed and developed TSAR (Tracing Sustainability in ARchitectures), a tool for analyzing sustainable software architectures

Wide Wings Media

Fullstack Developer

July 2023 - July 2024

Pune, India

- Fully redesigned the existing website for ticketkhidakee.com, replacing the existing LAMP stack with a Django-Postgres stack, leading to a ~45% increase in traffic and ~30% increase in user retention over 6 months
- Designed a robust cloud architecture on AWS, maintaining P95 latency below 100ms with ~10,000 concurrent users.
- Configured global CDN on AWS CloudFront and designed a caching policy successfully handling ~500,000 daily users

Mastercard

Software Development Intern

May 2023 - July 2023

Pune, India

- Wrote a serde protocol to translate between protocol buffers and AVRO-based schemas for event-driven applications
- Facilitated communication between heterogenous serialization format apps, reducing the data transformation delay by ~50%
- Wrote a proof-of-concept Spring application for the implemented protocol, hosted on the internal Mastercard repository

College of Engineering, Pune

Research Assistant

September 2022 - February 2023

Pune, India

- Designed an embedded data-acquisition pipeline for collecting image and weather data for soybean crops for Indian climates
- Developed a Python-Django backend for centralized data collection and a React frontend for data visualization
- Curated a dataset of ~5000 960px by 960px images of soybean crops in various lighting, angle, and weather conditions

PROJECTS

Django Core Contributor

- Contributed over 15 accepted pull requests adding patches, bug-fixes, and new feature additions to Django’s core codebase
- Submitted a GSoC 2022 proposal for adding rate-limiting to Django core and a second GSoC 2023 proposal to include CORS and CSP support in Django core

Microsoft Office Math Markup Language Parser

- Wrote a Python library to extract mathematical equations, text, and images from .docx files
- Included a conversion API for converting extracted equations into LaTeX
- Hosted on PYPI under the name docxlatex, with ~1000 downloads a month

WYSIWYG Mathematical Equation Generation

- Created an open source WYSIWYG equation editor for the web with a GUI for creating equations similar to Google Docs or Microsoft Word
- Wrote an API for conversion of created equation into LaTeX for convenient storage and/or rendering

SKILLS

Tools:	AWS, Google Cloud Platform, Docker, Git, Kubernetes, CI/CD
Technologies:	Django, Spring, Node.js, Flutter, React, React Native, MongoDB
Languages:	Python, C/C++, JavaScript, Java, Dart
Coursework:	Algorithms, Computer Networks, Network Security, Cloud Computing, Image Processing