

Siddharth Narsipur

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EDUCATION

University of Rochester

Rochester, NY

Bachelor of Science in Computer Science, GPA: 3.8, Dean's List

Aug. 2022 – May 2026

- **Coursework:** Operating Systems, Distributed & Parallel Computing, Data Structures & Algorithms, Computer Architecture, Computer Vision, Artificial Intelligence, Programming Languages

EXPERIENCE

Software Engineer Intern

May 2023 – July 2023

LiquiDonate Inc.

San Francisco, CA

- Enhanced marketplace by integrating sell & order features into REST and GraphQL APIs for use by large retailers.
- Implemented concurrent server-side caching to handle client requests, reducing API call latency by 25%.
- Built a scalable authentication microservice in Go that periodically revokes outdated API credentials and creates new ones.
- Deployed unit tests with the Ginkgo framework and set up API performance logging on Google Cloud using Sentry.
- Automated end-to-end inventory tracking for 100,000+ SKUs with complex variations using Shopify and Stripe webhooks.
- Designed a highly requested admin dashboard in React that displayed updates for 15,000+ real-time shipping movements.

Undergraduate Research Assistant

May 2024 – Present

URCS Bear Lab

Rochester, NY

- Developed a application for Meta Quest headsets with Unity and C# that can adapt Virtual Reality UIs for multiple environments, reducing setup time by 30% and alleviating the need for manual adjustments.
- Implemented a linear programming model in Python using the Gurobi solver that considers 50+ input parameters and places virtual elements in 3D space while preserving visibility and spatial utility.
- Created an intuitive VR tool for HCI research studies that allows subjects to simultaneously view up to 20 virtual rooms at once and switch between them with controller actions.

Teaching Assistant

Jan 2023 – Present

Hajim School of Engineering

Rochester, NY

- Hold office hours to improve lecture understanding and guide students with assignments for Data Structures, AI courses.
- Conducted workshops to improve beginner understanding in topics such as Machine Learning and Sorting Algorithms.

PROJECTS

3D PBR (Physically Based Rendering) Material Generation | *Python, PyTorch, CUDA, Bash scripting*

[Github](#)

- Constructed a computer vision pipeline using the ControlNet algorithm with Stable Diffusion models to generate highly photorealistic PBR texture maps from photographs, achieving a 20% lower error rate than open-source models.
- Trained a deep learning model on NVIDIA A100 GPUs using the MatSynth dataset. Employed memory efficient attention, aggressive data pre-processing, and CUDA acceleration to achieve higher batch size and <5s inference for large images.

Group4Good (Built @ HackMIT) | *Python, Flask, React, IRIS Vector DB*

[Github](#)

- Built a full-stack application with a Python-Flask backend to securely analyze purchase data and match common interests among groups with relevant non-profits based on K-Means clustering of vector embeddings generated by a sentence model.
- Leveraged Capital One's Nessie API and InterSystem's IRIS Vector Search to identify and recommend charities based on relevant transaction patterns, attaining 92% user-charity match satisfaction.

Nearvents (Dandyhacks Winner) | *Angular, TypeScript, Ionic, Firebase*

[Github](#)

- Created a college event management app used by 250+ students with real-time feed updates powered by Firestore.
- Implemented a location-based notification feed using Capacitor Geolocation API that increased engagement by 40%.

Distributed Counter | *Python, Java*

- Designed and implemented a distributed counter service with support for idempotency tokens and atomic operations.
- Integrated Apache Kafka's durable queuing system for reliable event logging and data loss prevention.

TECHNICAL SKILLS

Languages: Java, Python, Go, C, C#, SQL, Postgres, JavaScript, HTML/CSS, TypeScript

Frameworks: React, Node.js, Flask, Angular, Ionic, Next.js

Developer Tools: Git, Docker, Firebase, Google Cloud Platform, Scrum, Agile, Kubernetes, Flask, Unity, OpenCV