Satvik Utkoori

(732)-666-3436 | satvikutkoori@gmail.com | linkedin.com/in/satvik-utkoori | github.com/satviku1012

Education

University of Wisconsin - Madison Madison, WI

B.S. - Computer Science, Data Science *Expected Graduation: May 2028*

Relevant Coursework: Operating Systems, Big Data Systems, Data Structures and Algorithms, OOP, Artificial Intelligence, Machine Programming and Organization, Linear Algebra, Discrete Math

Experience

Capgemini June 2026 - August 2026

Software Engineering Intern *Richmond, VA*

- Developed a FastAPI backend on GCP Cloud Run to automate factory IT incident intake, reducing average escalation time by **61%** in test scenarios
- Integrated GCP Pub/Sub to push incidents to a processing endpoint, decoupling submission from downstream processing and buffering traffic spikes
- Created incident-processing handlers to send Teams alerts and create ServiceNow tickets with automated retries, achieving **97%** successful delivery across **1K+** test incidents

Deepiri (Open Source Collective) July 2026 – September 2026

Software Engineering Intern | github.com/Team-Deepiri *Remote*

- Built a FastAPI backend to process hardware traces and serve performance predictions for a GPU emulation platform, replacing traditional step-by-step simulation
- Cached repeated inference results in Redis to serve duplicate requests without rerunning model inference
- Conducted code reviews on ∼**200** PRs, using regression and E2E testing to validate new features

Molecular Imaging Technology Lab December 2025 – Present

Machine Learning Research Assistant *Madison, WI*

- Distributed medical image processing across a CHTC compute cluster using Docker containers
- Built PyTorch pipelines generating embeddings from **261K+** images to benchmark foundation models
- Evaluated the image encodings using scikit-learn models (k-NN/MLP), achieving up to **93.8%** accuracy

Projects

ZeroBoot | *Go, gRPC, Linux, TCP sockets, Docker*

- Built a distributed Go/gRPC pool of ready sandboxes, cutting startup **480ms** → **3.8ms p99** in 1K runs
- Served sandboxes via a nonblocking Go channel as goroutines refilled it round robin from 2 nodes
- Isolated sandboxes with namespaces/cgroups, froze processes when idle, and streamed tasks over TCP

Distributed Key-Value Store | *C++*

- Built a C++20 key-value store split into 16 shards with reader-writer locks so reads never block
- Partitioned and replicated keys across nodes via a consistent hash ring with 32 virtual nodes each
- Wrote a checksummed write-ahead log that replays on restart and truncates torn writes after crashes

Rent Evaluator | *Python, TypeScript, FastAPI, React.js, scikit-learn, PostgreSQL, Docker, EC2*

- Developed a full-stack web app predicting fair rent in Madison, processing **300+** listings for insights
- Built a FastAPI backend serving a linear regression model with **$58** mean absolute error on test listings

Midas Core (JPMorgan Chase Virtual Project) | **Certificate** | *Java, Spring, Kafka, SQL*

- Integrated a Kafka consumer in a Spring Boot microservice to asynchronously process transactions

Skills

Languages: Java, Python, Golang, C/C++, TypeScript, SQL
Frameworks & Libraries: Spring Boot, FastAPI, JUnit, gRPC, PyTorch, React.js
Cloud & DevOps: AWS, GCP, Git, Linux, Docker, Kubernetes
Distributed Systems: Kafka, Spark, Hadoop
Concepts: REST APIs, CI/CD, testing, concurrency, virtualization, microservices, ETL