

Sathvik Kurapati

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Education

University of Washington, *B.S. Computer Science Intended*

June 2024 – May 2028

- **Relevant Courses:** CSE 123, CS041, CS042; Secret Codes and Online Security, Cryptography, Programming in Java, Introduction to Game Programming
- *Admitted at age 15 for advanced academic achievement*
- Dean's List Award for maintaining a high GPA (3x)

Skills & Leadership

- **Technical:** SaaS, Distributed Storage, Data Pipelines; SQL, Database Security; Cryptography, Security Protocols; Git, Node.js, React, Electron, Jupyter, MATLAB, Figma, Flutter, IoT; Windows, Linux, MacOS
- **Core:** Distributed Systems, Cloud Computing, Databases, Cybersecurity, Algorithms, Problem-Solving, Teamwork, Innovation, Diversity
- **Leadership:** Led and mentored diverse teams; organized events and youth programs; advocated for STEM access and inclusion.

Experience

DuckDB Snowflake Extension (Open Source)

June 2025 – Present

C++, Apache Arrow, DuckDB, Snowflake

- Co-authored and successfully merged a community extension for the DuckDB OLAP database with 100k+ total downloads, peak 16k weekly downloads
- Engineered the extension to enable direct data access from Snowflake, utilizing Apache Arrow and ADBC for efficient columnar data transfer.
- Implemented a custom catalog to seamlessly integrate with DuckDB's core, allowing users to ATTACH and query Snowflake data as if local.
- PR available [here](#).

Earth Tracker Subsystem Lead, UW Husky Satellite Lab

Sep 2025 – Present

Distributed Systems, Cloud, Databases, C++

- Leading a team of 15 to own and develop the distributed image-processing module for HuskySat-2, supporting real-time orbital trajectory computation in a cloud-integrated, fault-tolerant environment.
- Working under a \$265,000 contract from the Department of Defense.
- Collaborating with a diverse, cross-functional engineering team.

Software Engineering Intern, Oneable AI

May 2023 – Sep 2023

Cybersecurity, Cloud, Distributed Systems, Node.js, React, WebRTC

- Designed and implemented P2P communication and code access modules for enterprise cloud platform.
- Collaborated with global teams, co-authored technical documentation, and maintained robust test coverage.

SWE Intern, Etairos Group LLC

Aug 2023 – Dec 2023

Full-Stack, Algorithms, Cloud, Security

- Developed and piloted a patented, award-winning cloud-based app for mental health, integrating secure data storage and privacy-first design.
- Coordinated with stakeholders to ensure regulatory compliance and system scalability.

Co-founder & CTO, Soundwave

Dec 2023 – Jan 2025

Distributed Data Pipelines, Machine Learning, Cloud, SQL

- Built scalable data pipelines and neural networks for real-time speech processing using Python, PyTorch, NumPy, and Google BigQuery.
- Drove innovation in cloud-based AI, securing \$150k LOI and collaborating with industry mentors.

Team Lead, Head of Programming, VEX Robotics

Sept 2021 – Present

Algorithms, C++, Distributed Control Systems

- Engineered 4000+ lines of C++ for distributed robot control; led team to national competitions, emphasizing collaborative problem-solving and system reliability.

Selected Projects & Research

Math AI Lab, University of Washington

Sept 2025 - Present

Mathematics, Algorithms, Programming, Lean

- Working on the project "Monogenic extensions of local rings" under Dr. Bianca Viray.
- Adding lemmas to Lean, a functional programming language for proof verification

Cryptography Research Under Dr. Neal Koblitz

2023 – 2024

Cybersecurity, Algorithms

- Explored advanced cryptographic protocols and security mechanisms; implemented secure communications modules.
- Researched under the co-inventor of elliptic curve cryptography.

Awards & Leadership

- **UW HuskySat-2 Earth Tracker Subsystem Lead:** Leading team, own distributed tracking module for satellite launch (2026).
- **TYE Global Pitch Competition at Microsoft – 1st Place:** CTO, led cloud-based prototype, secured \$150k LOI.
- **AIME Qualifier (2022, 2023):** Two-time qualifier; recognized for top national performance among high school mathematicians.
- **VEX Robotics Global Tournament:** Led programming and control development contributing to top national finishes and system reliability under competition constraints.
- **President's Volunteer Service Award (Gold):** Honored for community leadership, innovation, and STEM outreach.
- **Director, Harvard Covisualize (Mar 2021 – May 2025):** Led funding, managed diverse teams, published in distributed healthcare technology.

Publications

- Published the paper "**Enhancing Air Quality Prediction in IoT-Based Smart Environments Using Graph Neural Networks and CNN Models**" at the IEEE-sponsored 2025 International Conference on Cognitive Robotics and Intelligent Systems (ICC-ROBINS).
Certificate: <https://ieeexplore.ieee.org/document/11086324>