Saket Gollapudi

425.698.9421 | saketgollapudi@gmail.com | www.linkedin.com/in/saket312

Summary of Qualifications:

- Technical Skills: Java, C, C++, Python, System Verilog, SQL, x86 Assembly, HTML, JavaScript/TypeScript, MATLAB, GIT, PyTorch, ROS, AutoCAD, Fusion 360, SolidWorks, Microsoft Office.
- Soft Skills: Teaching, Leadership, Critical Thinking, Problem Solving, Public Speaking, Time Management.
- Four plus years of experience in research projects and engineering labs with strong leadership, critical thinking, and teamwork skills
- Passionate about exploring the multidisciplinary applications of computing, focusing on AI, Machine Learning, Robotics.

Education:

UNIVERSITY OF WASHINGTON | SEATTLE, WA

- Master of Science ~ Computer Science & Engineering; Current GPA: 3.93 · Courses: Analysis Of Algorithms, Artificial Intelligence, Machine Learning, Robotics, Natural Language Processing, Computer Vision
- Bachelor of Science ~ Computer Engineering; Minor in Aeronautical and Astronautical Engineering; GPA: 3.94 ~ Magna Cum Laude
- Graduated June 2024; Honors/Awards: Annual Dean's list 2021, 2023, 2024.
- Related coursework Courses: Data Structures/Parallelism, Machine Learning, A.I., Autonomous Robotics, Systems Programming, Security, Distributed

Systems, Algorithm Design, Digital Circuits, Orbital/Atmospheric Mechanics, Aerospace Control, Kinematics/Dynamics.

Relevant Experience:

• GRADUATE RESEARCHER | UNIVERSITY OF WASHINGTON | SEATTLE, WA

- Research project investigating private/memory-efficient optimization algorithms to fine-tune LLMs, focused on differential privacy and zeroth-order optimization. • Developed programs to fine-tune LLMs both on a GPU server and in simulated scenarios (on a testbed with simulated on-device scenarios)
- · Worked under Professor Sewoong Oh and Ph.D students weekly 10 hours, coding in python/pytorch, with the goal of developing a master's thesis.

•AVIONICS SOFTWARE ENGINEERING INTERN| BLUE ORIGIN | KENT, WA

- . Worked under the Director of New Glenn AERS Engineering & Systems to develop/test rocket G&C and system autonomy
- · Created an executable testing framework to analyze flight software and assess vehicle capabilities, presented issues to the chief engineers and autonomy team.
- . Worked 40-45 hours a week for 12 weeks in an industrial setting, communicating in large groups and senior engineers, coding with MATLAB.

• TEACHING ASSISTANT | UNIVERSITY OF WASHINGTON | SEATTLE, WA

- CSE 333 Systems Programming. Taught C, C++ and basic server behavior to help students build a mini Google search system.
- CSE 403 Software Engineering. Supervised multiple groups to debug/develop various projects from scratch. Help build experience with Git, CI, VC, etc.
- CSE 311 Foundations of Computing I. Taught fundamentals of logic, set theory, and algebraic structures with applications to computing.
- CSE 312 Foundations of Computing II. Taught fundamentals of probability and applications of randomness to computing
- CSE 446 Machine Learning. Taught the fundamentals of ML focusing on design of efficient algorithms that learn from data. Emphasis on algorithmic principles and how to use these tools in practice. Topics include supervised/unsupervised learning, regression and classification, deep learning, and optimization.
- Worked under the class professor to help prepare material for the course as well as teach a group of 30-50 students.

· Hosted Office Hours and answered questions about homework and course content while also developing/grading exercises, projects, & exams.

• UNDERGRADUATE RESEARCHER | ROBOT LEARNING LAB – UW | SEATTLE, WA

- · Worked on RACER project to develop a system that provides a geometric and semantic understanding of a vehicle's local environment, autonomously evaluating routes and contingencies, and adapting to behavior of evolving terrain.
- Developed offroad planning module using D* planning algorithm for robot to autonomously find best route if it encounters an obstacle.
- Worked in a group of three under planning project lead, weekly 10 hours, coding in python and C++, as well as using ROS packages.

• LAB RESEARCHER | AUTONOMOUS FLIGHT SYSTEMS LAB – UW | SEATTLE, WA

- Assisted in implementing/training a machine learning algorithm using LiDAR to identify objects in dense environments, focusing on human detection via drones.
- · 3D-modeled parts for equipment, improved drone structural integrity, and rewired/repaired sensors, planned/revised flight paths for efficient/safe testing.
- · Collaborated with a team of 6 for 10 hours weekly to train flight software, repair systems, and test autonomous drone operations.

Projects:

- DS-KeyValueStore (June 2024): Developed a highly available, scalable, fault tolerant, and transactional key-value distributed system. Developed multiple styles of client-server distributed systems: Paxos, Primary-Backup, Shard-Server. Software developed using Java.
- Robo-Assist (Mar 2024): Developed an autonomous assistive robot to pick up fallen items, tidy common areas, and manage tasks for high risk pregnancy individuals using Hello Robot's Stretch RE1 robot. Worked in a group setting. Software developed using Ros2, React, Python. Implemented multiple planning, computer vision, and search based algorithms/techniques to read sensor input like camera and LiDAR for main autonomous functionality.
- Autonomous MuSHR (Mar 2023): Developed an RC car/robot to autonomously drive around obstacles by implementing the robot's software and reading sensor input like camera, LiDAR, and touch input, allowing the car to make its own decisions. Software developed using Python.
- 333gle (Dec 2022): Built the front and back end of a multithreaded web server that given a bunch of query words will process and find the files and find the locations within the files of where the words appear. Developed using C and C++.

EXPECTED GRADUATION: DECEMBER 2025

OCT 2024 - PRESENT

JUNE 2023 - SEPT 2023

DEC 2022 - PRESENT

SEPT 2023 - JUNE 2024

SEPT 2019 - JUNE 2021