Abhinav Yedla

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Education

University of Georgia — Athens, GA
Masters of Science in Computer Science (Double Dawgs Program) — *Expected May 2027*
Bachelor of Science in Computer Science — *Expected May 2026*
Cumulative GPA: **3.67** | Honors: Presidential Scholar (Summer 2025)
Relevant Coursework: Algorithms, Software Engineering, Operating Systems, Web Programming, Data Science, Statistics

Work Experience

VIPR AI/ML and Agricultural Robotics — Athens, GA
Undergraduate Research Assistant — *Jan 2026 – Present*

- Developed **automated backend services** using **Python scripting** to ingest and process **LiDAR frames**, achieving high-fidelity **data validation** for large datasets.
- Improved **autonomous robot navigation** by implementing perception logic for tree trunks, performing rigorous **system testing** against ground-truth **LiDAR data**.
- Enhanced **software maintainability** and team clarity by documenting workflow processes and analysis methods using **standardized logging protocols** for future debugging.

Barberitos (On Campus) — Athens, GA
Student Worker — *Mar 2025 – May 2025*

- Coordinated **task delegation** within a shift team to maintain high service accuracy for daily foot traffic, ensuring **operational efficiency** in a fast-paced environment.
- Managed **daily transactions** exceeding **$1,000** with precise point-of-sale operations, ensuring **financial accuracy** and reliability for business operations.

Projects

Data Processing and Predictive Analytics System | *Python, Docker, CI/CD*

- Automated **ETL pipelines** for large-scale datasets using **Python and Docker**, reducing manual **data preprocessing time** and improving development cycles.
- Developed a **predictive model** by selecting effective features, ensuring high accuracy through rigorous **testing and validation** processes for improved data outcomes.
- Implemented **data validation scripts** to automate **anomaly detection** and identify data quality issues, enhancing data reliability and system integrity.

Movie Review Website | *React, RESTful APIs, Git*

- Developed a **full-stack web application** using **React and RESTful APIs** to streamline dynamic UI updates and user review rendering with efficient data flow.
- Implemented a **modular backend design** with **Git version control**, enhancing application **maintainability** and speeding up deployment processes for system updates.

Survey Form Web Application | *React, UI/UX, Web Standards*

- Simplified the **data submission flow** through effective layout and field grouping, developing intuitive **React components** for enhanced user experience.
- Incorporated iterative user feedback into the **frontend design architecture**, improving **overall accessibility** and interface responsiveness for a better user experience.

File Comparison Tool | *C, C++, Memory Optimization*

- Engineered a high-performance **byte-level utility** using **C/C++** to decrease comparative analysis runtime for **large files (1GB+)** efficiently.
- Optimized **memory allocation** and execution flow using **advanced data structures**, increasing **system reliability** during repeated analytical runs for stable performance.

Technical Skills

Languages: Python, Java, C/C++, C#, SQL, JavaScript, HTML/CSS, R
Frameworks/Libraries: React, Node.js, Next.js, Pandas, NumPy, Matplotlib
Tools & Platforms: Git (GitHub, GitLab), Docker, AWS, Linux/Unix, VS Code, npm, PyCharm, IntelliJ
Data & Perception: LiDAR (Velodyne VLP-16), Point Cloud Processing, PCAP File Processing, Spatial Analysis, Geometric Modeling
Concepts: Object-Oriented Programming, Agile, Data Analytics, Full-Stack Development, Backend & Frontend Engineering