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 **backend services** to ingest and process thousands of **LiDAR frames** in **Python**, enabling **high-fidelity validation** of large-scale datasets for agricultural robots.
- Enhanced **robot navigation** by implementing tree trunk perception logic, verified against ground truth, and **collaborated** with **development teams** on improvements.
- Ensured **knowledge sharing** and **code reproducibility** by documenting workflow processes and analysis methods using standardized logging protocols for team use.

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

- Managed **high-volume daily transactions ($1,000+)** and ensured zero financial discrepancy through **precise point-of-sale operations** and rapid **team communication**.
- Maintained **high service accuracy** during peak hours for 100+ patrons daily, coordinating tasks with a shift team using fast-paced communication workflows.

Projects

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

- Automated ETL pipelines using **Python** and **Docker (CI/CD)** to reduce manual **data preprocessing time** for large-scale datasets, similar to how **school administrators** manage data.
- Achieved **optimized predictive model accuracy** through rigorous evaluation of ML/NLP features and selection using **k-fold cross-validation**.
- Implemented KPI checks and **data validation scripts** to automate anomaly detection and identify data quality issues for **students** and **teachers**.

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-submitted review rendering.
- Enhanced application maintainability and **deployment speed** by implementing a modular backend design and robust version control using **Git**.

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

- Simplified the data submission flow by developing **React components** to organize layout and field grouping for improved user experience.
- Incorporated iterative user feedback into the **frontend design architecture** to improve overall interface responsiveness, akin to feedback cycles for **K-12 curriculum development**.

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+).
- Optimized memory allocation and execution flow with advanced data structures, increasing system reliability during repeated analytical runs.

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