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** for high-fidelity validation of **large-scale LiDAR datasets**, processing thousands of frames using **Python** for **AI/ML** models.
- Implemented tree trunk perception logic to improve **autonomous agricultural robot navigation**, validating against ground-truth data for enhanced **ML performance**.
- Documented workflow processes and analysis methods, ensuring reproducibility and clarity through **standardized logging protocols** for **MLops**.

Barberitos (On Campus) Athens, GA
Student Worker *Mar 2025 – May 2025*
- Coordinated task delegation for high-volume customer service, maintaining accuracy through efficient team communication.
- Managed over $1,000+ daily transactions with precise point-of-sale operations, ensuring zero financial discrepancy.

PROJECTS

Data Processing and Predictive Analytics System | *Python, Docker, CI/CD*
- Automated **ETL pipelines** for large datasets using **Python** and **Docker** with **CI/CD**, reducing preprocessing time on cloud for **MLops**.
- Optimized **predictive model accuracy** by evaluating multiple **ML/NLP** feature sets and selecting effective predictors using **k-fold cross-validation**.
- Implemented KPI checks and **data validation scripts** to automate **anomaly detection** and data quality issue identification for **ML pipelines**.

Movie Review Website | *React, RESTful APIs, Git*
- Developed a full-stack web application using **React** to streamline dynamic UI updates and review rendering via robust **RESTful APIs**.
- Implemented modular backend design and version control with **Git**, enhancing application maintainability and **DevOps deployment speed**.

Survey Form Web Application | *React, UI/UX, Web Standards*
- Simplified layout and field grouping using **React components**, streamlining data submission flow for users.
- Incorporated iterative user feedback into frontend design, improving overall accessibility and interface responsiveness.

File Comparison Tool | *C, C++, Memory Optimization*
- Engineered a high-**performance** byte-level utility in **C/C++**, decreasing comparative analysis runtime for **large files** (1GB+).
- Optimized memory allocation and execution flow with **advanced data structures**, increasing system reliability for repeated **performance** analysis.

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