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*
- Engineered backend services for automated **data validation**, processing **thousands of LiDAR frames** using **Python** to ensure dataset quality for analysis.
- Improved **robot navigation** by implementing tree trunk perception logic against ground-truth data, collaborating with a **cross-functional team** to refine algorithms.
- Documented workflow processes and analysis methods using **logging protocols**, ensuring clear **reproducibility and clarity** for team members and future diagnostic efforts.

Barberitos (On Campus) — Athens, GA
Student Worker — *Mar 2025 – May 2025*
- Coordinated task delegation within a shift team, maintaining **high service accuracy** for **100+ daily patrons** through efficient communication and operational workflows.
- Managed **$1,000+ daily transactions** using **precise point-of-sale operations**, ensuring **zero discrepancy financial reliability** and accurate data handling.

PROJECTS

Data Processing and Predictive Analytics System | *Python, Docker, CI/CD*
- Automated ETL pipelines for **large-scale datasets** using **Python** and **Docker**, reducing manual preprocessing time and optimizing data readiness for analysis.
- Improved **predictive model accuracy** by evaluating various ML/NLP feature sets and selecting effective predictors using **k-fold cross-validation** for optimal performance.
- Implemented **data validation scripts** with KPI checks, automating **anomaly detection** and identifying data quality issues for enhanced system reliability.

Movie Review Website | *React, RESTful APIs, Git*
- Developed a full-stack web application using **React** and **RESTful APIs**, streamlining **dynamic UI updates** and user-submitted review rendering.
- Implemented a modular backend design and **Git** version control, enhancing **application maintainability** and deployment speed for collaborative development.

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

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