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** to process and validate **large-scale LiDAR datasets**, ensuring high-fidelity data quality for thousands of frames using **Python**.
- Analyzed and improved **agricultural robot navigation** by implementing tree trunk perception logic, solving system problems through **cross-functional team reviews**.
- Documented **workflow processes and analysis methods** using standardized logging protocols, ensuring clarity and reproducibility for the **development team**.

Barberitos (On Campus) — Athens, GA
Student Worker — *Mar 2025 – May 2025*
- Maintained **high service accuracy** for over 100 daily patrons by coordinating task delegation within a team using **fast-paced communication workflows**.
- Ensured **financial reliability** with zero discrepancy by managing daily transactions exceeding $1,000 using **precise point-of-sale operations**.

PROJECTS

Data Processing and Predictive Analytics System | *Python, Docker, CI/CD*
- Automated **ETL pipelines** for large-scale datasets using **Python and Docker (CI/CD)**, reducing manual preprocessing time by over 70%.
- Improved **predictive model accuracy** by designing and testing effective ML/NLP features, enhancing system performance through rigorous **data validation**.
- Implemented **data validation scripts** to automate anomaly detection and data quality issue identification, enhancing system reliability and integrity.

Movie Review Website | *React, RESTful APIs, Git*
- Developed a **full-stack web application** using **React and JavaScript** to render dynamic UI updates and user-submitted reviews effectively.
- Implemented a **modular backend design** with **SQL database interaction**, enhancing maintainability and deployment speed for robust production services.

Survey Form Web Application | *React, UI/UX, Web Standards*
- Streamlined **user interface design** for data submission flows by simplifying layouts and grouping fields using **React components**.
- Improved **frontend design architecture** for accessibility and responsiveness by incorporating iterative user feedback into the **web application**.

File Comparison Tool | *C, C++, Memory Optimization*
- Engineered a **high-performance byte-level utility** for large file comparison using **C/C++ and Java**, decreasing analysis runtime significantly.
- Optimized **memory allocation and execution flow** using 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