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 ingest and process **LiDAR frames**, enabling high-fidelity validation of **large-scale datasets** using **Python**.
- Implemented tree trunk perception logic for **autonomous robot navigation**, enhancing system accuracy against ground-truth data within an **AI/ML platform**.
- Documented workflow processes and analysis methods using **standardized logging protocols**, ensuring system **reproducibility** and clarity for the team.

Barberitos (On Campus) — Athens, GA
Student Worker — *Mar 2025 – May 2025*
- Managed **high-volume operations** (100+ daily patrons) and coordinated teams, ensuring system accuracy and efficient service delivery.
- Managed **$1,000+ daily transactions** using precise point-of-sale operations, ensuring financial reliability within critical operational systems.

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 integrating CI/CD.
- Optimized **predictive model accuracy** by evaluating multiple ML/NLP feature sets and selecting effective predictors using **k-fold cross-validation**.
- Implemented **data validation scripts** and KPI checks to automate **anomaly detection** and identify data quality issues for robust **Data Science** systems.

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 improving deployment speed for **web platforms**.

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

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+) within system operations.
- Optimized memory allocation and execution flow using **advanced data structures**, increasing **system reliability** during repeated analytical runs and reducing **debugging** effort.

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