

# Abhinav Yedla

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## EDUCATION

### University of Georgia

*Masters of Science in Computer Science (Double Dawgs Program)*

Athens, GA

*Bachelor of Science in Computer Science*

Expected May 2027

Cumulative GPA: **3.67** | Honors: Presidential Scholar (Summer 2025)

Expected May 2026

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 in **Python** to ingest and process **thousands of LiDAR frames**, ensuring **high-fidelity data validation** for large-scale robotic datasets.
- Implemented advanced perception logic for **autonomous robot navigation**, enhancing system accuracy against ground-truth data through **cross-functional team reviews** and **iterative refinement**.
- Documented workflow processes and analysis methods using **standardized logging protocols** to ensure **system reproducibility** and operational clarity for the **robotics research team**.

### Barberitos (On Campus)

Athens, GA

*Student Worker*

Mar 2025 – May 2025

- Coordinated **task delegation** for a high-volume operation (over 100 daily patrons), maintaining **high service accuracy** through **fast-paced communication workflows**.
- Managed daily financial transactions exceeding **\$1,000** with **zero discrepancy**, applying **precise point-of-sale operations** to ensure system reliability.

## PROJECTS

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

- Automated **ETL pipelines** for **large-scale datasets** using **Python and Docker (CI/CD)**, significantly reducing manual data preprocessing time for analytical models.
- Evaluated multiple ML/NLP feature sets using **k-fold cross-validation**, selecting effective predictors to achieve **optimized predictive model accuracy** for **AI-driven insights**.
- Implemented **data validation scripts** and KPI checks to automate **anomaly detection** and ensure **high data quality** for robust analytical systems.

### Movie Review Website | React, RESTful APIs, Git

- Developed a full-stack web application using **React and RESTful APIs** to streamline **dynamic UI updates** and efficient **user-submitted content rendering**.
- Implemented a **modular backend design** and utilized **Git** version control, enhancing **application maintainability** and streamlining deployment for a scalable system.

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

- Simplified layout and field grouping using **React components** to streamline the **data submission flow** and improve **user interaction efficiency**.
- Incorporated iterative user feedback into the **frontend design architecture**, improving **overall accessibility** and **interface responsiveness** for a diverse user base.

### File Comparison Tool | C, C++, Memory Optimization

- Engineered a high-performance byte-level utility in **C/C++** to decrease **comparative analysis runtime** for **large files** (exceeding 1GB).
- Optimized **memory allocation** and execution flow using **advanced data structures**, increasing **system reliability** during repeated analytical runs of the utility.

## 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