Akhil Karumuri

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EDUCATION

University of Maryland, College Park   **College Park, MD**
B.S. in Computer Science - Machine Learning Track | Minor in Business Analytics | GPA: 3.95   *Expected May 2027*
- Dean's Scholarship & National Merit Scholarship Recipient
- Honors College | 5x Dean's List

Relevant Coursework: Artificial Intelligence, Data Science, Advanced Data Structures, Algorithms, Databases, Probability & Statistics, Linear Algebra, Web Application Development (JavaScript), Programming Languages

TECHNICAL SKILLS

Programming Languages: Python, Java, JavaScript, TypeScript, C/C++, SQL, HTML/CSS, R
Frameworks & Libraries: React, Node.js, Flask, Angular
Tools & Databases: PostgreSQL, MongoDB, Git, GitHub, Unix/Linux, JIRA

WORK EXPERIENCE

Huntington Ingalls Industries - Mission Technologies   **Hanover, MD**
Software Engineering Intern   *June 2025 - August 2025*
- Automated playback workflows across a geospatial platform by developing a C++ tool with 10 core commands (zoom, recenter, playback, etc.), reducing manual operator workload and enabling faster mission playback.
- Learned Agile development practices by participating in Scrum ceremonies and managing tasks in JIRA, gaining experience with ticket creation, progression, and the full development lifecycle.

Softrams   **Windsor Mill, MD**
Software Developer Intern   *June 2023 - August 2023*
- Built and integrated a secure login page with Angular and AWS, improving authentication reliability and laying the foundation for account management and future features.
- Gained hands-on experience with enterprise-scale Angular development, adapting quickly to a new framework and contributing production-ready code that aligned with team standards.

Johns Hopkins Applied Physics Laboratory   **Laurel, MD**
ASPIRE Computer Science Intern   *July 2022 - August 2022*
- Reduced search time from hours to seconds by digitizing 2,500+ handwritten part entries into a Python + OCR database.
- Improved OCR reliability by migrating to Google Cloud Vision + Butler API and adding RegEx/textdistance parsing, enabling consistent, structured Excel outputs across scanned entries.

PROJECTS

Football Pick'em Game | React, JavaScript, Flask, PostgreSQL   **January 2025**
- Built a full-stack playoff pick'em app with multi-league play, real-time leaderboards, and tamper-proof scoring, replacing manual tracking and improving the fairness of friendly competitions.
- Implemented secure authentication supporting 100+ users and developed an admin dashboard for commissioners to manage games, set betting lines, and configure leagues with role-based access controls.

Traveling Salesman Problem Optimization Project | Python, NumPy, SciPy, Matplotlib   **September 2025**
- Implemented and benchmarked TSP solvers (Nearest Neighbor, 2-Opt, Hill Climbing, Simulated Annealing, Genetic Algorithm, A* + MST), comparing runtime vs solution quality across graph sizes.
- Ran hyperparameter sweeps and generated plots analyzing scalability and convergence, using A* as an optimal baseline.

Bandwagon Application | Node.js, Express, MongoDB, JavaScript, HTML/CSS   **May 2025**
- Built a Node.js + Express web app with a dynamic form workflow, storing submissions in MongoDB and rendering application results in a styled confirmation page.
- Integrated live NFL team data via TheSportsDB API using Axios, including fallback handling for missing logos.