JAY R. PATE
Workright: US Citizen (By Birth)

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EDUCATION

University of Virginia, Charlottesville, VA **August 2020 - May 2025**
Bachelors in Computer Science & Biology (Computer Science GPA: 3.92)
<u>Activities</u>: Echols Scholar (top 5% of incoming class), UVA Awaaz Club (Cofounder), Intramural Soccer

SKILLS

- <u>Programming Languages</u>: Python, Java, Kotlin, C/C++, C#, JavaScript, TypeScript, x86 Assembly
- <u>Development</u>: HTML/CSS, React, Angular, NodeJS, Selenium, Git, Agile, CI/CD, Kafka, Kubernetes, Docker
- <u>Cloud / Databases / Machine Learning</u>: Azure, Firebase, AWS, MongoDB, SQL, PostgreSQL, LangChain, Splunk

EXPERIENCE

UKG (Workforce & Payroll Software), Atlanta, GA
<u>Software Engineering Intern</u> **September 2024 - December 2024**
- Accelerated file processing by optimizing backend logic. This improved efficiency for 14,000+ corporate clients.
- Decreased micro-service application downtime by 2% with Kotlin-based automated health checks that detect breakages before they reach production/client, ensuring uninterrupted service.

Freddie Mac (Fortune50 Mortgage Corporation)**,** McLean, VA
<u>Computer Science and Machine Learning Intern</u> **May 2024 - August 2024**
- Automated 5+ critical cross-team processes with Python, reducing workload for 30+ cybersecurity FTEs.
- Enhanced pattern recognition and anomaly detection to safeguard 200+ endpoints, including company-wide emails.
- Engineered an ML-powered data exfiltration algorithm to classify sensitive data types and detect unauthorized outbound data transfers with 80% accuracy.

Neighborhood Studios (Startup Incubator), Atlanta, GA
<u>Software Developer Intern</u> **November 2023 - January 2024**
- Implemented a full-stack feature (React, Express.js, AWS) to enable paid services and monetize in-house startup.
- Built an LLM-based tool to analyze competitor tweets, informing data-driven product development and strategy.
- Leveraged AI/ML techniques (Reinforcement Learning, RAG algorithms) boosting LLM prompts accuracy by 50%.
- Developed a document processing pipeline using LangChain, HuggingFace, and MongoDB Atlas for tokenizing, embedding, and storing tweets/PDFs to improve context-aware QA.

Warburg Pincus (Private Equity Firm)**,** New York, NY
<u>Software Engineer Intern</u> **June 2023 - August 2023**
- Revamped key financial visualizations in $109B portfolio management UI, speeding up crucial user journeys.
- Reduced React codebase by 1% through refactoring and optimizations, reducing maintenance costs for FTEs.
- Resolved critical bugs with scalable TypeScript/C# solutions, improving site reliability for 5,000+ global users.

PROJECTS

Educator Hub - React.js/Firebase Dashboard for School Administrators **Summer 2023**
- Coded a full-stack application with CRUD functionality including enrollment, grading, and authentication features.

Socket Chat - Real-Time Messaging Application in C with Network Programming **Spring 2023**
- Architecture a command-line chat application using TCP/IP client-server architecture for low-latency communication.

VOLUNTEERING

Emergency Medical Technician (EMT) **May 2021 - February 2024**
- Triaged and coordinated treatment for 200+ patients in collaboration with police and emergency response teams.