SHALOM JAISON

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PROFESSIONAL SUMMARY

Dual-degree Computer Science & Mathematics candidate (**UMass Amherst**, **GPA 3.93**) with a proven track record in **Full-Stack Development**, **Blockchain**, and **Machine Learning**. Designed **scalable systems**, optimized **ML models**, and engineered **high-performance applications**—combining **data-driven problem-solving** with **cutting-edge technologies**

EDUCATION

University of Massachusetts - Amherst **Sep 2021 - May 2025**
Bachelor's, Computer Science *GPA: 3.93*
- Software Eng, Web Dev, Distributed Applications [Crypto], ML, Computer Vision, OS, Computer Networks, Database Management

University of Massachusetts - Amherst **Sep 2021 - May 2025**
Bachelor's, Math (Dual Concentrations: Stats & Actuarial Sci) *GPA: 3.93*
- Multivariate Calculus, Linear Algebra, Mathematical Finance[Derivative Pricing, Financial Markets], Statistical Analysis, Design of Exp

PROFESSIONAL EXPERIENCE

Duck Creek Technologies **Remote**
Full Stack Software Engineer *Feb 2025 - Present*
- Currently developing a scalable Notification as a Service (NaaS) platform, enabling businesses to send centralized, multi-channel notifications via email, SMS, and in-app messaging with customizable templates and searchable history
- Built a collapsible sidebar with app navigation, improving UI accessibility and workflow efficiency using React & Tailwind CSS.
- Created high-fidelity UI mockups in Figma, defining core layouts and improving frontend development alignment.
- Designed system architecture documentation covering setup, installation, and API endpoints, ensuring seamless developer onboarding.

UMass Rescue Lab **Amherst, MA, USA**
ML Research Assistant *Feb 2025 - Present*
- Currently developing an AI-driven classification system that analyzes crime-related conversations, extracting key evidence through a pre-trained message analyzing model and preset investigative queries.
- Engineered a pipeline to generate realstic crime-related conversations using prompt engineering for AI evaluation & evidence extraction
- Designed a structured dataset with investigative queries to test the model's ability to identify crime elements for legal evidence.

UMass CICS **Remote**
ML/RL Research Assistant (Python | NumPy | Matplotlib | Seaborn | TLA Framework) *Jun 2024 - Aug 2024*
- Designed and developed a multi-layer Q-learning framework with dynamic tau adaptation and a custom gate, improving decision accuracy by 25% through optimized state-action evaluations
- Streamlined RL evaluation using advanced epsilon-greedy policies and visual Q-value heatmaps, enabling in-depth performance analysis across 10,000 training episodes and improving policy refinement
- Automated reward tracking and penalty analysis, optimizing workflows to accelerate model convergence and improve learning efficiency

PROJECTS

Two-Good Landing Page Recreation (HTML | CSS | JavaScript | GSAP)
- Led the development of a pixel-perfect, responsive replica of the Awwwards-winning Two-Good landing page, meticulously aligning with high-caliber frontend design standards to ensure seamless UI/UX consistency
- Engineered immersive, high-fidelity interactions by integrating GSAP animations and JavaScript-driven transitions, accurately replicating dynamic motion effects for a fluid user experience
- Optimized load performance and scalability through efficient asset management, lazy loading, and CSS/JS minification, ensuring lightning-fast rendering across all devices and browsers

Blockchain Simulator (Proof of Work (PoW) | UTXO | Merkle Trees | Transaction Validation | Python)
- Increased blockchain framework efficiency by 40% by developing a backend system with custom classes for transaction validation, UTXO management, and Merkle tree management
- Strengthened blockchain security by enforcing rigorous input/output constraint checks and secure coinbase minting mechanisms
- Improved block validation accuracy by developing a transaction validation system to simulate blockchain operations with PoW mining

SKILLS

Programming Languages: Python, JavaScript, HTML/CSS, Solidity, C/C++, Java, Git, PostgreSQL, TypeScript, Tailwind CSS
Frameworks and Libraries: Express.js, Node.js, React.js, NumPy, Docker, Pandas, ONNX, Pytorch
Tools & Technologies: Git, Postman, Figma, Linux/Unix, Matplotlib, Seaborn
Databases: MongoDB, PostgreSQL
Languages: Hindi, Malayalam, English