Hrishabh Ayush

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Education

Cornell University Ithaca, NY
B.A. in Computer Science & Mathematics, TATA Scholar *Expected - May 2027*

Experience

Software Engineering/Machine Learning at Aladdin AI Apr 2025 – Aug 2025
Machine Learning Intern *Manhattan, NY*
- Deployed and customized over 10 open-source AI agents using dockerization with benchmarking categories
- Improved the scalable CI/CD pipeline using GitHub Actions and AWS (EC2, S3), Render, CloudFlare, and Railway, reducing deployment time by 30% and automating testing and Docker container deployment.

Software Engineer Intern at Seismic Systems Jan 2025 – Apr 2025
Smart Contract and FullStack Development Intern *Manhattan, NY*
- Developed an Automated Market Maker in Solidity that transforms each swap into an AI-generated violin track
- Created a React Native mobile app for real-time market-driven audio feedback, enhancing user engagement and reducing playback latency by 30% for seamless trading interactions

Head of Engineering at Cornell Blockchain Club Jan 2024 – Present
Cornell University *Ithaca, NY*
- Designed a secure, decentralized verification layer model using blockchain technology to facilitate bespoke verification for gig-based tasks, improving transparency and trust in video collaboration processes
- Engineered an AI-powered matching system using large language models (LLMs) to compare video renders with transcribed text, achieving 90% accuracy and cutting manual review times by 2 hours per video
- Mentored 5 groups of 3-4 students with technical insights, demo strategy, and problem-solving code and concepts

Projects

Context-aware screen overlay agent using RL | *Typescript, ActivityWatch, Docker* May 2025 - Aug 2025
- Created a real-time, modular voice agent integrated into a screen overlay, capable of analyzing and responding to user activity through reinforcement learning models with 300 ms sub-latency
- Engineered adaptive behavior in the agent using feedback loops based on user interactions and the Doodles APIs, increasing task relevance and boosting user interaction rates by over 60% during an average session
- Awarded $20K for delivering the Best Immersive Experience at Dreamnet Character agent hackathon

Event Driven Insurance Prediction Markets | *Typescript, Solidity, Python, Node.js* Feb 2024 - Present
- Won $5000 for building the Best Product in Encrypted DeFi at Penn Blockchain Hackathon.
- Built a parametric-insurance marketplace across verticals that auto-pays claims, shrinking settlement time by 95%.
- Designed an uncorrelated yield stream for hedge funds using pooled underwriting and stochastic modeling, targeting 5% APY while mitigating market correlation risk

Insurance claims denial predictor for healthcare providers | *Python, ClinicalBERT, OpenAI* June 2025
- Innovated ClaimAssist for predicting insurance claim adjudication from physician's note & Electron Health Record
- Architected a machine learning model incorporating Random Forest, ClinicalBERT, and OpenAI, improving claim adjudication prediction accuracy to 90% on $5,000$ synthetic data points with a fallback mechanism
- Awarded the First Prize with the best collaborative solution in legacy healthcare among 50+ people.

Web3 SaaS for Social Media Optimization | *TypeScript, Web3.js, Solana, AWS, Git* May 2024 – Feb 2025
- Implemented frontend components with REST APIs and developed payment processing using Solana, potentially reducing transaction processing time by 5 seconds and enhancing platform responsiveness for user interactions
- Integrated a secure file upload system using AWS S3 presigned URLs and CloudFront, which improved content delivery speed by 40% and reduced backend infrastructure exposure, ensuring data security and optimizing UX

Technical Skills And Awards

Languages: Python, Java, Solidity, C/C++, OCaml, Rust
Libraries: Numpy, Matplotlib, Pandas, Git, TensorFlow, PyTorch, Scikit-Learn
Fullstack: Next.js, Tailwind, JavaScript, TypeScript, Node.js, React.js, AWS, Prisma, Express.js, Docker, PostgreSQL
Awards: USAMO Qualification, AMC 12 Distinguished Honor Roll – Top 1% in the world, 2 times AIME Qualified, NTSE Scholar, KVPY Fellowship, Online Physics Olympiad High Honors, National Math Olympiad