Aryan Jain

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EDUCATION

Carnegie Mellon University   Pittsburgh, PA
Bachelor of Science in Computer Science, Minor in Machine Learning   *May 2027*

Coursework: ML (PhD), Distributed Systems, Computer Systems, Data Structures & Algorithms, AI, Robotics
Honors/Activities: SCS Dean's List (Fall 2024), CMU AI Safety Initiative, Scottie Ventures, UEA

WORK EXPERIENCE

Amazon Web Services | Software Engineering Intern, AI/ML   May 2025 – August 2025
- Built a service within AWS Agentic AI to translate Bedrock Agents into equivalent code in other agent frameworks
- Collaborated with clients including Autodesk, Netflix, and Vanguard to validate the tool and migrate to Bedrock AgentCore
- Achieved 95% agent similarity by recreating 20+ features including tool-calling, guardrails, memory, and agent collaboration
- Launched with customer-facing SDK integration ↗, and prototyped a CLI to auto-generate AI agents from user questions ↗

Hadrian | Software Engineering Intern   May 2024 – Aug 2024
- Developed Python/Go backend and Kafka pipeline (<50ms latency) to enable robotic tool-loading and sync with factory state
- Trained and deployed an Azure ML model achieving 98.5% accuracy in fully automated validation of tool position/type
- Cut tool-loading times by 75%, saving 11k technician-hours yearly in building parts for clients such as Anduril and Raytheon

Compos Mentis | Founding Engineer   Aug 2023 – May 2024
- Developed platform using LLMs to accelerate case qualification and legal review, generating early revenue from legal firms
- Built RAG system with Azure Functions and Airflow DAGs to process 50K+ pages, extract text via AWS Textract, embed documents in Milvus for vector search, and surface case insights using fine-tuned LLMs — speeding up analysis by 8x

Machina Labs | Software Development Intern   Jul 2022 – Sep 2022
- Built React and Python application to streamline part design and generate production specs, deployed on Azure Kubernetes
- Created ML pipeline to improve part alignment with laser scans, applying Bayesian optimization and projection techniques
- Achieved 40% faster iteration and 25% reduced margin of error on parts for clients such as NASA, SpaceX, and the USAF

United Talent Agency | Software Engineering Intern   May 2022 – Jul 2022
- Developed Github and Azure CI/CD workflows for a talent management suite, cutting deployment time and failures by 50%
- Implemented Redis-based observability system logging 2k+ events daily, including API traffic, health checks, and VM activity

PROJECTS

Train of Thought ↗ | Typescript, Google Cloud, Next.js, Vercel AI
- Built multi-agent LLM system capable of chain-of-thought reasoning and recursive subproblem validation with Google Gemini
- Integrated features such as agent backtracking, prompt decomposition, safety and correctness validation, and output critique
- Deployed chat interface and tested on 20+ programming puzzles, achieving ~80% increase in passed tests vs. standard model

TexPilot ↗ | Typescript, Python, Perl, LlamaIndex, AWS Lambda, S3
- Built a Github Copilot-style browser extension for LaTeX code generation, autocompletion, and explanations with LLaMA 2
- Created real-time (<450ms) Python backend for context-aware completions using indexed LaTeX code/docs via LlamaIndex

File-Caching Proxy ↗ | C, Java, RMI, JMeter, Valgrind, GDB
- Engineered a low-latency distributed system for remote file operations using a server, caching proxy, and interposition library
- Reduced file access latency by 70% in simulated loads using a LRU chunk caching mechanism, achieving a 90% cache hit rate
- Designed server-proxy protocol using Java RMI to safely handle 300+ concurrent clients with consistent open-close semantics

FireFinder ↗ | AWS, C++, Node.js, React Native
- Developed real-time pipeline for fire detection and location-based evacuation routing within 3 seconds of a fire outbreak
- Integrated AWS IoT, S3, and Lambda to trigger alerts and stream sensor data from a prototype Arduino-based fire detector

ACHIEVEMENTS

VEX Robotics World Championship (2x) | Achieved top ~30 out of 11k teams as Team Captain (2019-23)

AWS Certified Solutions Architect | **Lockheed Martin Scholar ($40k)** | **Edison International STEM Scholar ($50k)**

TECHNICAL SKILLS

Languages: C, C++, Python, Javascript, Typescript, Java, Go, SQL, Bash, HTML/CSS
Services: AWS, Azure, GCP, Databricks, Kubernetes, Airflow, Spark, Elasticsearch, Kafka, Redis, MySQL, PostgreSQL
Tools/Frameworks: Git, Docker, Node.js, React.js, Express, Flask, Django, gRPC, GraphQL, Tensorflow, PyTorch