Advait Chirmule

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EDUCATION

Arizona State University — Tempe, AZ
Master's of Science in Computer Science — *Aug 2023 – May 2025*

EXPERIENCE

Full Stack AI Developer — May 2025 – Present
Cognia Security — *Tempe, AZ*
- Building a security dashboard for enterprise clients, to assess and resolve vulnerabilities.
- Implemented a CI/CD pipeline across AWS and Azure using Terraform, integrating Azure Defender, OWASP ZAP and Burp Suite for automated vulnerability testing.
- Designed a separate pipeline to extract all findings from the cloud and storing in a MongoDB database.
- Managed tasks and agile workflows using Linear, and used Cursor AI to help boost code writing efficiency.

Research Aide — Aug 2024 – May 2025
Arizona State University — *Tempe, AZ*
- Studied the effects of hashtags on engagement and toxicity in social media through large-scale user studies.
- Led experiments with 2,000+ participants, automating data collection and validation workflows with Selenium.
- Processed 700K+ posts using Python (Pandas, NumPy), performed sentiment analysis, and visualized statistical analysis using PowerBI.
- Applied Reinforcement Learning to optimize hashtag strategies, reducing toxic comments by 20%.

PROJECTS

Vocab Master | *ASP.NET, C#, JavaScript, AJAX, Kotlin, XML, Firebase* — Jan 2025 – Present
- Developed a cross-platform GRE study app (web using ASP.NET MVC and Android using Android Studio)
- Serving 100+ users with features such as word list practice and a multiplayer drawing game.
- Integrated Firebase via RESTful APIs for live sync, secure login, and game room management.
- Developed an algorithm to handle lag and maintain sync. Added SQL Server caching to reduce latency by 60%.

Minibase Software Modification | *Java, Linux, Algorithms, Git* — Jan 2024 – May 2024
- Extended Minibase (Java DBMS on Linux) with column-store support and bitmap indexes, for efficient querying.
- Designed a custom compression algorithm using Run-Length Encoding (RLE) and Bit Stuffing, reducing storage footprint and achieving 15% faster performance than standard RLE.
- Validated new features with CRUD operations and joins, successfully handling 100K rows in under 30 seconds.

Taiga API Extraction | *React, FastAPI, Recharts, Node.js, Docker* — Jan 2024 – May 2024
- Developed a Taiga project analytics tool delivering project analysis metrics to improve sprint efficiency.
- Built with React (frontend), Node.js middleware, and a FastAPI backend (with OAuth 2.0 for login)
- Achieved 80% faster performance with Redis caching and deployed scalable, containerized services using Docker.
- Collaborated in Agile workflows, including sprint planning, code reviews, and daily standups, improving velocity.

PUBLICATIONS

Jailbreaking Proprietary Large Language Models | *Arizona State University* — ACL ARR 2024 Feb
- Studied cryptographic ways to encode prompts to jailbreak, automated GPT API calls to speed up work by 50%.
- Analyzed results using Power BI, achieving up to 60% jailbreaking success across multiple large language models

TECHNICAL SKILLS

Languages: Python, Java, JavaScript, C#, C++, XML
Frontend: React, HTML, CSS, RESTful API, HCI
Backend: .NET, MySQL, Postgres, AWS, Docker, Kubernetes
Others: Agile, Github, AI/ML, Problem Solving, Teamwork