

# Advait Chirmule

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## EDUCATION

### Arizona State University

Master's of Science in Computer Science, GPA: 3.80/4

Tempe, AZ

Aug 2023 – May 2025

## EXPERIENCE

### Full Stack AI Application Intern

May 2025 – Nov 2025

Cognia Security

Tempe, AZ

- Built a security dashboard for a startup to help clients continuously assess and fix vulnerabilities.
- Developed an end-to-end Spring Boot pipeline to extract asset information from Azure, normalize, enhance and store in MongoDB, with raw data archived in S3.
- Automated vulnerability scanning across Azure by integrating Azure Defender and OWASP tools into a CI/CD pipeline using Terraform, and generating security reports required.
- Managed agile workflows in Linear and used Cursor AI to enhancing coding productivity by 40%.

### 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 – Aug 2025

- Built a cross-platform GRE study app serving 100+ users, enabling vocab practice and a multiplayer word game.
- Developed web (ASP.NET MVC) and Android versions (Android Studio) connected via Firebase RESTful APIs for secure login and game room management.
- Created a custom algorithm to handle network lag and maintain multiplayer game sync.
- Added SQL Server caching for offline functionality and 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