ABHINAV REJA

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SUMMARY

Master's candidate in Computer Software Engineering with extensive back-end development experience from internships across diverse industries. Team-oriented engineer skilled in optimizing performance, designing scalable APIs, and building AI/ML applications.

EDUCATION

Master's in Computer Software Engineering **August 2024 – May 2026**
Arizona State University, Polytechnic, Arizona, USA **GPA: 3.94/4**
Coursework: Data Structures and Algorithms, Software Quality Management, SDLC, Mobile Applications, Cloud Computing.

Bachelor's in Information Technology **August 2018 – May 2022**
Oriental Institute of Science and Technology, Bhopal, India **GPA: 3.36/4**
Coursework: Data Structures, Object Oriented Programming, Computer Networks, Operating Systems.

TECHNICAL SKILLS

Programming Languages: Java, Python, C/C++, JavaScript, HTML5, CSS.
Frameworks & Technologies: Django, Django REST Framework, Flask, FastAPI, Spring, Hibernate, RESTful API design, Elasticsearch, AspectJ, MVC, OpenAI, Chatbot Development.
ML & LLM: LLM fine-tuning (Llama-3, LoRA, QLoRA), recommender systems.
Databases & Storage: PostgreSQL, MySQL, SQL, Cassandra, NoSQL.
Cloud/DevOps/Tools: Google Cloud Storage, Docker, Docker Compose, Git, Jira, Postman, Agile & Scrum, Software Development Life Cycle (SDLC).

EXPERIENCE

Backend Developer Intern **June 2025 – August 2025**
Vosyn Inc. **Chicago, IL, USA**

- Worked with VosynVerse Pod Rigel team to develop and maintain content ingestion pipelines and related **REST APIs**.
- Implemented the Read tab's "Built-for-You" API end-to-end—fine-tuned Llama-3-8B (LoRA) to auto-tag content against a genre/topic taxonomy and serve history-aware, tag-affinity recommendations with unseen filtering + fallbacks (Django/DRF, PostgreSQL).
- Designed and implemented new **PostgreSQL schemas** to manage audio, text, and video files supporting the Vosyn ecosystem.
- Built a Django REST batch-processing API for bulk audio/video pipelines, improving average API latency by **25%**.
- Implemented a **Cucumber-based** integration-testing framework with **Gherkin specifications** to validate end-to-end API workflows, automating release validation and accelerating release cycles by **15%**.

Software Engineer **Jul 2023 – May 2024**
WINspect Technologies Pvt. Ltd. **Mumbai, India**

- Contributed to the development of GPS-based NTP synchronization software and introduced **Redis** caching to store and retrieve time-sensitive data, reducing synchronization delays and errors by approximately **10%**.
- Implemented automated integration tests for core synchronization functionalities using **Google Test (gtest)**, reducing manual testing efforts by **30%** and identifying **10%** more defects during pre-deployment phases.
- Developed scripts to automate repetitive configuration tasks using **Python** and collaborated with senior engineers to document system processes, which reduced support ticket resolution times **by 18%.**
- Integrated **REST APIs** for real-time status updates, synchronization accuracy & error logs on the time synchronization dashboard.

Web Developer Intern **Feb 2022 – Apr 2022**
Wipro Limited **Bangalore, India**

- Engineered the HTML5/CSS3/JavaScript frontend for an E-Voting platform, implementing performance optimizations (lazy loading, CSS minimization) that boosted interface responsiveness by **10%** and improved overall UX.
- Redesigned **MySQL** database integration by optimizing schema, indexes & queries achieving a **20% reduction** in query execution.
- Implemented advanced session management protocols, including session timeouts and token-based validation which enhanced user authentication and reduced unauthorized access attempts by **15%** improving overall security measures.

PROJECTS

Tardis Programming Language(Demo) **February 2025 – May 2025**
Designed and implemented Tardis—a custom programming language.

- Built a **Definite Clause Grammar (DCG)**–based lexer and parser in Prolog to produce an AST supporting boolean, integer, and string types, and enabled core constructs (assignment operator; first-class conditionals; 'for'/'while' loops; polymorphic 'print').
- Developed a single-argument command-line compiler/interpreter for '.tds' files, accompanied by comprehensive documentation (grammar spec, build/run instructions, sample programs) and a demo walkthrough.

AI-Powered Mental Health Chatbot **August 2024 – November 2024**
Built an end-to-end mental-health chatbot using Python and OpenAI GPT-3.5 with 90%+ screening accuracy.

- Implemented a chatbot using **Python** and **OpenAI GPT-3.5 Turbo API** for mental health support.
- Implemented crisis keyword detection using a dictionary-based approach and basic mental health screening like GAD-7 and PHQ-9, achieving over **90% accuracy** in identifying sensitive conversations and triggering tailored safety responses.
- Designed a minimal UI with real-time chat functionality and a **PostgreSQL** database to securely store user interactions.