Tejas Ajay Parse

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EDUCATION

Arizona State University, Tempe, AZ **May 2026**
Master of Science in Computer Science GPA: 4.0/4.0
Coursework: *Databases Management, Cloud Computing, Systems Design, Statistics, Knowledge Representation, Natural Language Processing*

Indian Institute of Information Technology, Sri City, India **May 2024**
Bachelor of Technology in Computer Science CGPA : 9.30/10
Coursework: *Data Structures & Algorithms, Machine Learning, Reinforcement Learning, Object Oriented Programming, Data Mining*

SKILLS

- **Programming & Scripting Languages:** Python, JavaScript, TypeScript, Java, SQL, NoSQL, PostgreSQL, HTMl, CSS, C++, C, Kotlin, MATLAB
- **Frameworks and Libraries:** React, Node.js, PyTorch, Android, Tensorflow, Pandas, Scikit, Express.js, Spacy, FastAPI, Bootstrap, Tailwind,
- **Cloud Services:** AWS & Azure (S3, Lambda, Blob Storage, Service Bus, Events, DynamoDB)
- **DevOps:** CI/CD, Git, Github, Agile, Linux, Jupyter, Flash, LangChain, Linux, VS Code IDE

EXPERIENCE

Software Developer (Part-Time) **Psych for Life, Tempe, AZ** **Dec 2024 – Present**
- Developed reusable and scalable UI components in **React.js and TypeScript**, forming the foundational building blocks for interactive learning lessons while ensuring optimal performance with **Redux for state management**.
- Diagnosed and resolved critical, hard-to-detect bugs that caused website crashes by debugging **React** state issues, **API failures (Node.js/Express.js)**, and database inconsistencies **(MongoDB)**.
- Reviewed and optimized pull requests, enforcing best practices in **code quality, performance optimization, and CI/CD workflows** using **GitHub** Actions.
- Integrated **RESTful APIs**, improved database schema design in **MongoDB**, and optimized **server-side logic in Node.js and Express.js** to enhance application efficiency.
- Deployed and maintained application services on **AWS (EC2, S3)** and containerized components using **Docker** for better scalability.

Full Stack Dev Intern **DatStek, India** **Jan 2024 – Jun 2024**
- Created a Sports CMS utilizing **ReactJs, and NodeJs**, **optimizing** MongoDB aggregation pipelines by **14%**.
- Delivered mobile and web applications for managing electoral campaigns using **FastAPI, PostgreSQL, and React.**
- Architected and implemented a legal document management suite using the **PERN** stack and **Google Docs API**, enabling admins to build **dynamic templates** for users to generate legal documents.

Full Stack Dev Intern **Settyl Tech Pvt Ltd, India** **May 2023 – Sep 2023**
- Collaborated on the company's **ReactJs micro frontend** architecture, developing inventory management modules.
- Responsible for engineering **20+ RESTful endpoints** within the **Node.js** backend microservice architecture.
- **Migrated** Kafka Events to Azure Event Hubs, **reducing latency by 19%** in inter-database synchronization.

Software Development Intern **Appscms Technologies, India** **Jul 2022 – Nov 2022**
- Crafted over **50+ GIF processing tools** to the platform's front end with **HTML, CSS, and Vanilla JavaScript**.
- **Elevated platform performance** to **achieve 700,000 monthly sessions** through feature development and testing.

PUBLICATION

- **Tejas Ajay Parse**, Tanishq Awasthi, Dushyant Yadav, Dr Piyush Joshi, "QAAD: Quality Aware Adaptive Denoising", IEEE 11th International Conference on Signal Processing and Integrated Networks (SPIN), March 21 – March 23, 2024, India

PROJECTS

PetSanctum – *Github Website Demo*
- A web app for finding adoptable animals, uploading pets, and requesting rescue for stray animals.
- Developed REST APIs using **Express.JS** with **MongoDB** as a persistence layer while utilizing **React** on the front end that follows the **MVC Model** and uses **Redis** for Caching which also is **CI/CD** pipelined.

Enhanced Video Classification and Retrieval System Using HMDB51 Feature Engineering - *Github*
- Built a video search and classification system using HMDB51, primarily with **Python** and **PyTorch**, creating various features from videos and integrating feature extraction, dimensionality reduction, and retrieval mechanisms.
- Implemented classifiers (K-NN, SVM) and a relevance feedback system to improve classification and user-driven search.
- Optimized retrieval with Locality-Sensitive Hashing (LSH) and clustering for efficient similarity search and label analysis.

Benchmarking LLMs for Logical Reasoning & Creating an Auto-Evaluator Agent - *Report*
- Evaluated and compared logical reasoning performance of LLaMA and ChatGPT using benchmark datasets like LogiQA and ARCT.
- Developed an error taxonomy to categorize reasoning failures, providing insights for improving reasoning chains in LLMs.
- Created an auto-evaluator LLM agent, achieving **81.98% accuracy** in categorizing reasoning errors based on the defined taxonomy.

ACHIEVEMENTS

- **Achieved 1st place** in **Smart India Hackathon 2023** organized by **Government of India**, standing out among **200+ teams.**
- **Ranked globally at 3425** in **Google Hashcode 2022** with **1,071,918 points (India Rank: 1456)**.
- Solved over **500 problems** on competitive programming platforms like **Leetcode, Codeforces** and **Codechef**.