Kavisha Parikh

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EDUCATION

University of Massachusetts Amherst **Sep 2024 - May 2026**
Master of Science in Computer Science GPA: 3.96/4.0
Coursework: Neural Networks, Advanced Database Systems, Data Visualization, Software Engineering, Network Security, Cryptography.

Gujarat Technological University **Sep 2020 - Aug 2024**
Bachelor of Engineering in Information Technology
Coursework: Data Structures and Algorithms, Computer Architecture, Operating Systems.

Indian Institute of Technology Madras **Sep 2021 - Aug 2024**
Bachelor of Science in Data Science
Coursework: Machine Learning, Deep Learning, Math for ML, Stats for ML, AI Search Methods, Data Structures.

SKILLS

Programming Languages: Python, Java, SQL, C#, JavaScript, C++, HTML, CSS
Frameworks: PyTorch, scikit-learn, NumPy, Pandas, D3.js, React.js, Node.js, Express.js, Vue.js, ASP.NET Core, Flask, FastAPI
Databases & Storage: PostgreSQL, MySQL, MongoDB, SQLite, Redis
Tools and Platforms: AWS (EC2, S3, SQS), Docker, Git, GitHub, VSCode, google colab, JIRA, Postman, Linux
Concepts: DSA, OOP, Distributed Systems, System Design, Microservices, Unit Testing, End-to-end Testing, TDD, CI/CD

WORK EXPERIENCE

Software Engineer Intern - Mercury Infoway **Dec 2023 - May 2024**
- Designed and implemented 4 core modules for a national e-governance platform using **C#** and **ASP.NET** Core MVC.
- Established role-based access control (**RBAC**) to enable fine-grained **permissions for 12 roles** and securely support thousands of users.
- Accelerated dashboard **page load time** by **optimizing SQL queries** and **introducing caching**.
- Increased unit and integration **test coverage from 45% to 80%,** uncovering 7 critical regression bugs before production.
- Collaborated in cross-functional **Agile sprints** and conducted **code reviews** to deliver user-focused features across the **SDLC**.

PROJECTS

Badminton Shot and Player Movement Prediction
- Designed and implemented an **R-GCN with attention** to predict player movement trajectories and shot types.
- Modeled **temporal and spatial dependencies** on **43K+ strokes (4,325 rallies)** using relational graph-based modeling.
- Built **end-to-end ML pipelines** for preprocessing, training, evaluation, and experimentation.
- Reduced model parameters by 44.58% compared to state-of-the-art DyMF model, while maintaining comparable predictive performance.

RepoRadar - Codebase Summarizer (HackUMass XIII) Live app
- Engineered a **code summarization pipeline** that clones, parses, and chunks Python repositories using **AST traversal**, extracts imports, functions, and classes, and feeds them into a **schema-constrained LLM** to generate structured summaries across **150+ file codebases**.
- Constructed **interactive dependency graphs** from parsed output using **Pyvis** and **NetworkX**, to visualize module-level relationships across hundreds of components.
- Devised **caching** and **fallback mechanisms** for **LLM API** calls, **reducing response latency by 80%** and **cutting API costs by 40%** for cached content and deployed the system on **AWS Elastic Beanstalk** with auto-scaling to enable real-time analysis.

E-Commerce Shopper's Behaviour Prediction
- Built an end-to-end machine learning **classification pipeline** to predict purchase intent from **user behavior data**.
- Performed data **cleaning**, **feature engineering**, **model selection**, and **hyperparameter tuning** using Python ML libraries.
- Achieved **70% prediction accuracy**, evaluating models with quantitative metrics to guide decisions.

Business Analytics Capstone - ABC Medical and Surgical
- Analyzed 6 months of sales and procurement data to **identify inefficiencies and demand patterns**.
- Used data **visualization** and **quantitative analysis** in **Power BI** to surface trends and operational bottlenecks.
- Collaborated with an onsite manager to translate findings into **actionable recommendations** for improving store efficiency.

CERTIFICATES

- Prompt Engineering and Programming with OpenAI and LangChain from Columbia+