Parth Doshi

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EDUCATION

B.S. Computer Science: Machine Intelligence, B.S. Mathematical Statistics   Aug. 2016 – Dec 2019
Purdue University   *West Lafayette, IN*

EXPERIENCE

Fathom Health   Remote/NYC
Software Engineering Team Lead   *Jan. 2022 – Present*

- Designed and operated production systems processing 250,000+ medical charts daily with burst capacity to 2M charts, maintaining 24-hour SLA requirements in HIPAA-compliant healthcare environments.
- Led technical vision for 10-15 engineers developing generative AI product that reduced client onboarding from months to weeks, while mentoring junior developers on system design and ML implementation best practices.
- Architected fault-tolerant data transformation system replacing client-specific PySpark parsers with unified DBT + Apache Beam pipeline, achieving 10x performance improvement and strict SLA compliance.
- Designed production LLM infrastructure with multi-provider failover (Gemini, Claude, GPT-4o), intelligent caching, and RAG implementation that maintains customer SLA compliance.

Software Engineer   *Jan. 2020 - Jan. 2022*

- Achieved 10x model training speedup by migrating from GPUs to TPUs, enabling larger model architectures and improved accuracy for medical coding tasks.
- Implemented post-model data transforms to filter, clean, and combine predictions, improving automation rates and reducing manual review requirements.

Microsoft   Redmond, WA
Software Engineering Intern   *May 2019 – Aug. 2019*

- Automated provisioning and deprovisioning of roles to provide just-in-time (JIT) access of production Azure resources using Azure REST API and C#.
- Reduced each team's surface of attack by as much as 70% by restricting permissions based on the duties required for each on-call position.

Viptela   San Jose, CA
Software Engineering Intern   *Jun. 2018 – Aug. 2018*

- Predicted cross-platform network topologies using multiple ML models (random forest, logistic regression, SVMs) with hyperparameter optimization.
- Built automated deployment system for predicted networks on AWS and hypervisor platforms (ESXi, KVM) with infrastructure as code.
- Co-invented patented network topology prediction algorithm (US Patent 11,228,500), demonstrating novel approach to automated network configuration.

PROJECTS

VolleyAI | *Python, Astro, Svelte, YOLO, OpenCV*

- Developed a web application for AI-powered volleyball game analysis using YOLO computer vision to detect players and ball tracking.
- Implemented custom heuristics for rally detection and created a YouTube-style video player with intelligent timeline highlighting for game footage review.
- Built full-stack application with Python backend (LiteStar), Astro frontend, and deployed on GCP with containerized ML inference.

Personal Website | *Astro, Svelte, TypeScript, TailwindCSS*

- Rebuilt personal website from React/Gatsby to modern Astro + Svelte stack for improved performance and developer experience.
- Implemented responsive design with TailwindCSS and integrated MDX for blog content with automatic sitemap generation.

Technical Skills

Languages: Python, SQL (BigQuery), Bash, TypeScript, HTML, CSS
Frameworks: Apache Spark/Beam, DBT, Airflow, React, Node.js, Astro/Svelte
ML/AI: LLMs (Gemini, Claude, GPT-4o), RAG, YOLO, Computer Vision, TensorFlow
Infrastructure: GCP, Azure, Kubernetes, Terraform, Docker, Monitoring/Logging, Git/jj