NISHANT BASU

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Education

Texas A&M University, Texas	May 2026
Master of Science in Computer Science	CGPA : 3.66/4

Relevant Coursework

- OOPs
- Machine Learning
- Software Engineering
- Parallel Computing

Technical Skills

Languages: TypeScript, JavaScript, HTML5, CSS, C++, C#, .NET, Python, Go, Dart, SQL, PostgreSQL, MongoDB .
Developer Tools: Version Control (Git), Gitlab, CI/CD, Android Studio, Splunk, Postman, Fiddler, Jira, Confluence.
Technologies/Frameworks: React, Redux, Machine Learning libraries, Lit Element, NodeJS, Web Components, Vue.js, Angular, ASP.Net Core, Django, ExpressJS, Kafka, Redis, LangGraph, Micro Front-ends, Micro Services, Docker, Kubernetes, NGINX, Jest, Rollup-Webpack, Open WC, SinonJS, ChaiJS, Mocha, Web-Test-Runner, JUnit, XUnit, Tailwind, Vector DBs (FAISS, Chroma), Pivotal Cloud Foundry, Microsoft Azure, AWS.

Experience

Tesla

Software Engineering Intern   May 2025 – Present

- Developed and maintained core backend services using Go, Python, and ASP.NET Core for vehicle configuration and ordering systems, handling high-volume data processing with optimized performance.
- Built scalable data aggregation APIs with advanced caching using Redis and Kafka event-driven architecture, leveraging Go routines and parallelization to efficiently process large datasets from multiple sources.
- Architected and implemented an AI-powered LangGraph chat agent from scratch for business stakeholder interactions, including complete graph design, tool orchestration, and integration with vector databases (FAISS, Chroma) for intelligent data retrieval and chunking.

Dell

Senior Software Engineer   April 2021 – August 2024

- Led a team of 6 developers in developing and improving the global checkout system for Dell.com and Premier platform, acting as SME for frontend infrastructure across all cart and checkout teams to drive consistency and streamline order processing workflows.
- Managed full software development lifecycle (Analysis, Design, Build, QA, Security, Deployment) and practiced Agile methodologies, participating in daily scrums, sprint planning, and code reviews while leveraging automation tools to enhance efficiency and ensure high-quality deliverables.
- Oversaw the development of 50+ micro front-ends and microservices using ASP.NET Core and C# for REST APIs backend, and LitElement web-components in TypeScript as frontend, utilizing Pivotal Cloud Foundry and CI/CD tools to ensure 99.9% up-time during high-traffic events.
- Developed suffix-based web components for lazy loading and created an internal NPM package for dynamic loading, reducing time-to-interact by 5% and bundle size by 30%.

Projects

Multimodal fusion, Food Calorie prediction | Python, Machine Learning, Transformers

- Developed a multimodal deep learning framework integrating CGM sensors, food images, and viome data to predict lunch calorie intake, achieving 32.7% improvement in validation accuracy within first 3 epochs
- Implemented specialized neural architectures (LSTM, CNN) with attention fusion mechanisms and gradient clipping, reducing RMSRE from 1.13 to 0.78 through dynamic modality weighting.

Logistics Management for CureBay | Express, Lit, Nginx

- Freelanced to create a logistic management app, **DMS(ppt-link)**, handling approximately 1,200-1,500 orders daily across 3 states in India. Built and managing independently using Express.js, MongoDB, Lit and Three.js.

Lit Web Component Lazy Loader | Typescript, Node, NPM

- Developed an NPM package to lazy load suffix-based Lit element dynamic components, eliminating 100% of initial load for non-critical web components.
- Reduced initial bundle size by 30% and improved time-to-interact by 5% for micro front-end applications.

Accomplishments / Training

- GB-MERIT Undergraduate Scholarship (IIIT Bhubaneswar) for top 3 academic achievers in IT Major.
- Dell Hack-To-Hire Hackathon Winner.
- Nav Ujjwal Hackathon Finalist for **Parchi** - Mobile App for paper less Medical Services.
- ACM Summer School on Algorithmic and Theoretical Aspects of Machine Learning at IIIT Bangalore.