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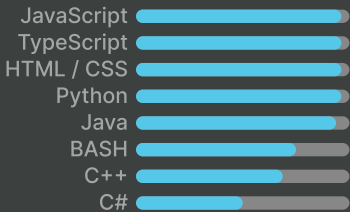
EDUCATION

- May 2025

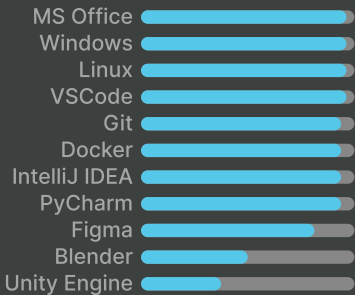
B.S. Computer Science

University of Texas at Dallas

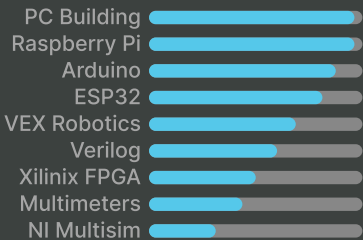
PROGRAMMING



TOOLING



HARDWARE



LANGUAGES



REFERENCES UPON REQUEST

ABOUT ME

I am a detail-oriented software engineer with strong skills in learning, leadership, and teamwork, driven by a passion for solving complex problems. I earned my B.S. in Computer Science from UTD, where I developed a solid foundation in software development, system design, and applied machine learning. I am seeking opportunities in full-stack, backend, or frontend development where I can build scalable, high-performance software that makes a meaningful impact.

LEADERSHIP

- Team Lead / Lead Developer

QueryQuest Team, University of Texas at Dallas

2024

Richardson, TX

Led a 6-member team in an accelerated 1-month sprint to deliver a functional web-based trivia game, ensuring alignment with project goals.

Managed the integration of team contributions, ensuring consistent functionality, quality, and seamless collaboration across all components.

Authored extensive documentation and reports, detailing project architecture, design decisions, and technical processes for clarity and future reference.
- Team Lead / Lead Developer

Fintasy Team, University of Texas at Dallas

2024

Richardson, TX

Led a team of 7 members, taking charge of the design, architecture, and technical development of a paper trading platform (semester project).

Directed frontend and backend development efforts, ensuring seamless integration, timely feature delivery, and extensive documentation.

Managed team coordination, driving progress, resolving conflicts, and ensuring alignment with project goals and deadlines for successful delivery.
- Team Co-Lead

TIDAL Special Projects Team, Texas A&M University

2019 - 2021

College Station, TX

TIDAL performs research into machine learning, engaging students in projects that address real-world challenges.

Worked on building machine learning models to judge a storm's severity from limited data, such as lightning strikes.

Identified, collected, and processed candidate data, including lightning strikes and other environmental factors, to create clean, structured datasets for effective model training, evaluation, and performance optimization.

PROJECTS

CLICK TO VIEW ON GITHUB

- TAMU Grades

2022 - Present

Built a web app to scrape, parse, process, and render information about courses and grade distribution data from Texas A&M's Registrar's Office.

Designed and optimized a relational database schema to efficiently store and query over 181,000 course sections, 12,000 courses, and 8,000 professors.

Currently processes requests generated by over 5.7k unique users per month with an average latency under 50ms.

Utilized Skills: Full-stack development, database design and optimization, unstructured data extraction and processing, UI/UX design, containerization.

Built using: TypeScript, Vue.js, Fastify, PostgreSQL, Docker, Alpine Linux, Cloudflare, Vite, Vitest, Jest, Git.
- Harmonic Links

2025

Developed the responsive and interactive user interface of a web-based music discovery game using Next.JS, React and Tailwind CSS.

Implemented core gameplay features on the client side using dynamic UI components, including elements for joining games, searching for and selecting artists, connection status, and many other real-time multiplayer interactions.

Collaborated closely with backend developers to consume API endpoints securely and efficiently, ensuring smooth data flow and minimal latency.

Utilized Skills: Frontend development, UI/UX design, React hooks, state management, responsive design, real-time data handling, Agile workflow.

Built using: TypeScript, React, Next.js, Tailwind CSS, Supabase, OAuth, Vercel.

CLICK FOR MORE DETAILS

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HARD SKILLS

Development & Architecture:

- Full Stack Development
- Frontend & Backend Dev
- Web Development
- API Design & Development
- Test-Driven Dev (TDD)
- CI/CD & DevOps
- Containerization (Docker)
- Git & Version Control
- Software Architecture

Cloud & Scalability:

- Cloud Computing Arch.
- Scalability & Perf. Optimization
- Load Balancing & Fault Tolerance

Data & Machine Learning:

- Machine Learning & AI
- Data Modeling & Optimization
- SQL (MySQL, PostgreSQL)

UI/UX & Design:

- UI/UX Design
- Responsive Web Design
- Tailwind CSS, Vue.js
- Web Design (CSS, HTML)

Security & Performance:

- Secure Coding & Authentication
- Monitoring & Logging
- Debugging & Troubleshooting

Other Skills:

- Computer Vision
- Natural Language Processing
- Shell Scripting & Linux
- Technical Documentation
- OOP & Functional Programming

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SOFT SKILLS

Leadership & Teamwork:

- Team Leadership
- Cross-functional Collaboration
- Delegation & Task Management

Communication:

- Effective Communication
- Technical Documentation & Reporting

Problem-Solving:

- Critical Thinking
- Troubleshooting & Debugging
- Decision-Making Under Pressure

Time Management & Productivity:

- Prioritization
- Deadline Management
- Self-motivation & Initiative

Learning & Growth:

- Continuous Learning
- Self-Improvement
- Willingness to Adapt & Learn

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HLT - NLP & Sentiment Analysis

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2025

- Led a 4-member team in designing, implementing, and evaluating multiple language processing models for multiple in-depth course projects.
- Developed probabilistic language models from scratch with smoothing and unknown-word handling, evaluating performance via perplexity metrics.
- Implemented and compared neural network architectures for sentiment analysis, including FFNNs, RNNs, LSTMs, Text CNN, and TinyBERT techniques, analyzing trade-offs in complexity, training time, and accuracy.
- **Utilized Skills:** Natural language processing, machine learning, deep learning, model evaluation, PyTorch, neural network design, data preprocessing.
- **Built using:** Python, PyTorch, NumPy, pandas, scikit-learn, GloVe embeddings, TinyBERT, Jupyter Notebooks, Git.

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Fintasy

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2024

- Collaborated on the development of a paper trading platform with competitive social features using real-time stock market data.
- Developed a responsive, scalable frontend, ensuring cross-platform compatibility, fast performance, and faster load times through static file hosting, CDN integration, and optimized resource delivery.
- Designed and implemented RESTful APIs to ensure efficient backend communication, optimizing data retrieval and performance.
- **Utilized Skills:** Full-stack development, database design and optimization, UI/UX design, modular architecture, API development.
- **Built using:** TypeScript, Python, Vue.js, FastAPI, Flask, PostgreSQL, Docker, Alpine Linux, Cloudflare, Vite, Vitest, Jest, Git.

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QueryQuest

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2024

- Designed and implemented a PostgreSQL schema to manage users, trivia questions, categories, and leaderboard data efficiently.
- Developed RESTful APIs with FastAPI to handle authentication, core gameplay logic, and real-time score tracking.
- Built an interactive Vue.js frontend with dynamic UI components and smooth game flow for single-player trivia challenges.
- **Utilized Skills:** Full-stack development, database design and optimization, UI/UX design, modular architecture, API development.
- **Built using:** TypeScript, Python, Vue.js, FastAPI, PostgreSQL, Docker, Alpine Linux, Cloudflare, Vite, Naive UI, Git.

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RELEVANT COURSEWORK

Artificial Intelligence & Machine Learning

- **Introduction to Machine Learning:** Supervised and unsupervised learning, model evaluation, feature selection, overfitting, and cross-validation techniques.
- **Human Language Technologies (Natural Language Processing):** Focus on large language models (LLMs), including fine-tuning for tasks.
- **Introduction to Computer Vision:** Image processing, object detection, feature extraction, and basic computer vision algorithms.

Software Development

- **Software Engineering:** Software design principles, development methodologies, testing strategies, version control, and project management practices.
- **Programming Language Paradigms:** Exploration of functional, procedural, and object-oriented programming, along with their design principles and trade-offs.

Systems & Architecture

- **Systems Programming in UNIX:** Shell scripting, system calls, process management, memory management, and inter-process communication.
- **Computer Architecture:** In-depth study of processor components, memory hierarchy, pipelining, caching, and hardware subsystems.
- **Digital Logic and Computer Design:** Design and analysis of digital circuits.

Data & Algorithms

- **Database Systems:** Relational databases, SQL, schema design, query optimization, indexing, transaction management, and performance tuning.
- **Data Structures and Introduction to Algorithmic Analysis:** Core data structures, algorithm efficiency, complexity analysis, and practical problem-solving techniques.
- **Advanced Algorithm Design and Analysis:** Optimization techniques, graph theory, computational complexity, and advanced problem-solving strategies.