

Tri Nguyen

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EDUCATION

The University of Texas at San Antonio

Bachelor of Science in Computer Science, Specialization in Data Science & ML

May 2028

GPA: 3.93/4.0

EXPERIENCE

Vorpex

Software Developer

May 2026 - Present

San Antonio, TX

- Built and deployed a high-performance marketing website for Vorpex using Next.js 14 App Router and Tailwind CSS
- Integrated Cal.com booking, Resend transactional email, and Plausible Analytics into a static Next.js site, implementing custom API routes with rate limiting and honeypot spam protection

CooledTured LLC

Software Engineer Intern

April 2026 - Present

Bensenville, IL

- Building authentication systems, cloud deployment infrastructure, and data management pipelines using AWS, Kubernetes, and Docker
- Developing full-stack features for player registration, tournament organization, match reporting, and store management systems

Association Computing Machinery

Secretary

October 2025 – Present

San Antonio, TX

- Coordinated event logistics including room bookings, inventory management, and organizational planning for ACM events
- Collaborated closely with the President and Vice President to ensure smooth operations and execution of ACM initiatives and events serving 2000+ student members

PROJECTS

Vision | Python, React, JavaScript, MongoDB atlas, HasData API, Fast API, Leaflet

March 2026 – March 2026

- Selected as 1 of 15 teams in the USA for Redbull Basement Competition (0.2%)
- Integrated a Retrieval-Augmented Generation (RAG) pipeline using Google Gemini Pro to generate structural code compliance explanations from a curated engineering knowledge base.
- Built a deterministic structural analysis engine implementing AISC 360-16 and ASCE 7-22 load combinations to evaluate beam capacity, deflection, and code compliance.

Pipely | Python, React, TypeScript, MongoDB atlas, XGBoost

February 2026 – February 2026

- Built an AI-assisted system to align multi-year inline inspection (ILI) data and detect corrosion growth despite odometer drift and tool variation.
- Applied self-supervised ML (XGBoost, DBSCAN, Bayesian regression) to match anomalies and model defect growth over time.
- Integrated Google Gemini (RAG) for standards-based integrity insights; built React/TypeScript front end and Python/Node.js backend.

Vending Machine Robot | Python, Computer Vision, Pytorch, OpenVino

August 2025 – Present

- Developed real-time human detection and tracking systems using OpenVINO for autonomous robot interaction
- Engineered robot movement and hardware control logic to support autonomous navigation and operational reliability
- Implemented automated pathfinding and navigation using computer vision techniques for obstacle-aware robot movement

TECHNICAL SKILLS

Languages: Java, Python, JavaScript, HTML/CSS, SQL, TypeScript

Developer Tools: Git, VS Code, Visual Studio, PyCharm, IntelliJ, Matplotlib, Bokeh, Docker, Kubernetes

AI/ML & Data Science: Pandas, NumPy, OpenVino, AI/ML (RAG, LLMS, PyTorch, Scikit-learn, data preprocessing)