Nathan Perez

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EDUCATION

University of Texas at Dallas — Jan 2023 - May 2026
Bachelor of Science in Computer Science | 3.7 GPA — *Richardson, TX*

Midland College — Jan 2021 - Dec 2022
Associate of Science in General Studies | 4.0 GPA — *Midland, TX*

WORK EXPERIENCE

Undergraduate Research Assistant (REU) — May 2025 - Jul 2025
University of Louisville — *Louisville, KY*

- Integrated explainability techniques (LIME & SHAP) into **Python** machine learning classifiers to support disaster response decision making and to test hypothesis regarding data leakage and alternative data splitting approaches
- Conducted literature review of explainable & interpretable machine learning techniques
- Participated in weekly meetings with PI & lab members regarding progress
- Wrote report with findings and presented research poster to staff & students

Web Development Intern — Jan 2024 - May 2024
Ayoka Systems — *Arlington, TX*

- Developed & debugged enterprise application features using **Vue.js**, **Typescript**, and **Entity Framework Core**
- Key implementations included inventory management and tracking, bar-code scanning, and PDF generation
- Employed Git feature branch workflow to work effectively within a team
- Communicated in daily stand-ups regarding progress

Software Development Intern — May 2023 - Aug 2023
Tyler Technologies — *Plano, TX*

- Designed and implemented full-stack overhaul to web app that calculated and presented resource projections
- Developed asynchronous REST API with promised-based requests using **Node.js**, **Axios**, & **SQL**
- Leveraged Agile Development principles with Jira, while maintaining a multi-branch Git workflow with team
- Revamped front-end dialogues with new features and a modern user interface with **Material UI**
- Wrote and published Confluence documentation over new database structure & **ReactJS** components
- Responsible for aiding in live deployment to production

Mathematics Tutor — Feb 2022 - Oct 2022
Midland College — *Midland, TX*

Receptionist — Sep 2019 - Jan 2023
Bush Tennis Center — *Midland, TX*

PROJECTS

Game Boy Emulator — Aug 2024

- Sole programmer on Game Boy emulator, implemented in **Rust** and **SDL2**
- Verified CPU is specification accurate through extensive testing of opcodes, interrupts and timing

Moist Meter — Oct 2023

- Front-end developer on IoT web-app, 1st place winner in hackUTA's Main Track and State Farm's track
- Created live data visualizations in **ReactJS / TS**, utilizing data severed from **Google Cloud** & **MongoDB**

HateDeception: Adversarial NLP — Jan 2023

- Responsible for cleaning, analysis, and visualization of 32,000 records before & after EDA & GloVe, with **Python**
- Worked in red team to decrease LLM classification by 20% while maintaining meaning of tweets with **PyTorch**
- Presented with 4 peers in research symposium to audience of professors, students, and researchers

TECHNICAL SKILLS

Languages: C, C++, C#, Rust, Java, JavaScript, Typescript, Python, SQL (Microsoft), HTML, CSS, SCSS, Dart
Frameworks: React, Vue.js, .NET, Flutter, Bootstrap 5, ExpressJS, Entity Framework Core
Developer Tools: Unity, Git, MongoDB, Jira, Confluence, SSMS, IIS, Unix, Figma