Nathan R. Perez

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EDUCATION

The University of Texas at Dallas, *BS of Computer Science* | **3.88 GPA**   Expected Graduation May 2025
Midland College, *Associate in General Studies* | **GPA: 4.0**   May 2023

EXPERIENCE

Tyler Technologies, *Software Development Intern*   May 2023 – August 2023
- Designed and implemented full-stack overhaul to **React JS / SQL** web-app that managed resource projections for 16 quarters
- Validated new calculations through tests against ~4,000 records
- White-Boarded database architecture changes with team to facilitate addition of customized inputs to projection model
- Improved data integrity with normalization and relational principles in **Microsoft SQL Server**
- Revamped 3 front-end dialogs with new features and a modern user interface design with Material UI
- Leveraged **Agile Development** principles with Jira, while maintaining a multi-branch **Git** workflow with team
- Developed asynchronous **REST API** with promised-based requests using **Node.js** and **Axios**
- Wrote and published Confluence documentation over new database structure, react components, and outstanding issues
- Collaborated and communicated with primary stakeholders on a weekly basis to design, prototype, and deploy an updated version of the application.
- Responsible for aiding in deployment to production
- Presented final product with coworker to department members using PowerPoint

ACM Research, *Research Participant*   January 2023 – May 2023
- Contributed to 10-week **Natural Language Processing** project with ACM Research, *HateDeception: Using Adversarial Learning to Deceive Hate Speech Detection Models for Twitter*
- Responsible for the cleaning, lexical analysis, and visualization of 32,000 records with **Python**, **NumPy**, **Pandas**, and **NLTK**
- Successfully decreased large language model (LLM) detection rate by 20% while preserving semantic integrity of sentences
- Implemented EDA and GloVe algorithms on Twitter data, used **Matplotlib** to interpret results
- Delivered presentation to audience of 30+ highlighting key findings and outcomes

Midland College, *Mathematics Tutor*   January 2022 – October 2022
- Taught and supported the development of mathematical skills in 10+ classes including Remedial Math, Quantitative Reasoning, Math for Teachers I & II, Statistics, College Algebra, Trigonometry, Pre-Calculus, Calculus I and Calculus II
- Conveyed intricate concepts in colloquial terms
- Instructed group review sessions of 3+ participants for exams

Private Mathematics Tutor, *Self-Employed*   November 2021 - January 2023
- Coordinated with parents and students to find effective times for sessions
- Identified needs of students to ensure improvement in mathematics
- Taught students from the ages of 12 to 21
- Effectively communicated with students to ensure mastery of the material
- Provided intuitive ways of thinking about problems and mathematical concepts

Bush Tennis Center, *Receptionist*   September 2019 – January 2023
- Keyholder, Worked in a fast-paced environment managing 18 tennis courts and 8 pickleball courts for max of 75 people in an hour
- Tennis Racquet stringer, an average time of 30 mins per racket with ~10 rackets per week, totaling 1,000+ tennis rackets, 4 years of additional prior racket experience
- Trained 5 members of staff in the use of Club Automation Software
- Familiar with club automation systems at the Administrator level, including but not limited to running reports, contacting clients based on reports, mass communications, membership, Refunds, Equipment management, Account Mering, Staff info, Event creation, Court bookings, Custom payments, Lesson management, Staff Scheduling
- Marketed and sold memberships, lessons, clinics, rackets, tennis string, add-ons, and camps to customers
- Trained of 35+ volunteers
- Managed of 17+ volunteers during events
- Handled money and checks
- Communicated information regarding our outreach program and nonprofit activities to patrons

PERSONAL PROJECTS

Account Aggregator,
- Led team development of financial aggregator which visualized transactions with data collected from **Stripe API**, allowing for overview of accounts such as Bank of America, Vanguard, American Express and 12,000+ participating institutions
- Charts created using **Recharts**, fluid animations with **Spring**, component primitives from **Radix UI**, styled with **SCSS**

My Pomodoro, *https://github.com/NathanPerezR/my_pomodoro*
- Native windows application for tracking time
- Built in **Flutter** using **Dart**, UI/UX design follows Google's Material UI standard

Flags of the United States, *https://main--elaborate-khapse-3bc884.netlify.app/*
- Informational website which shows users the various state flags of the United States and their history
- **React JS** web app, uses wikipedia's REST API to load all information, **CI/CD** with **Netify** and **Github**

Personal Website, *nathanperezr.github.io*
- Personal portfolio website created to showcase skills and personal projects that are not related to academic work
- Created with **CSS**, **HTML**, **Bootstrap 5**, and pre-planned in **Figma**

SCHOLARSHIPS & AWARDS

2023 CMD-IT/ACM Richard Tapia Conference Scholarship *($900)*   Fall 2023
- Full scholarship to attend 2023 Tapia conference

UTD Transfer Scholarship *($500 per semester)*   *Spring 2023 - Present*
- Awarded for transferring with a 4.0 / 4.0 GPA

UTD Phi Theta Kappa Transfer Scholarship *($1,500 per semester)*   *Spring 2023 - Present*
- Awarded for transferring with a 4.0 / 4.0 GPA while holding active Phi Theta Kappa membership

UTPB Undergraduate Research Grant, *($1000)*   Fall 2022
- Received for research proposal on *Using EOG and EEG readings to move a computer mouse*

UTPB Undergraduate Research Grant, *($1000)*   Fall 2022
- Received for research proposal on *A Django web Application for the visualization of oil wells creation and plugging in the Permian Basin*

Friends of the Library Textbook Scholarship, *($800 per semester)*   Fall 2022 & Spring 2022
- Volunteer 20+ hours per semester at the Friends of the Library bookstore
- Responsible for shelving, pricing, and sorting books

UTPB Transfer Elite Scholarship, *($1,250 per semester)*   Fall 2022 & Spring 2023
- Awarded for maintaining a 3.5+ GPA

Legacy Scholarship, *($1,000 per semester)*   Fall 2021 & Spring 2022
- Volunteer 40+ hours per semester at various non-profits in Midland Texas
- Maintained a 4.0 GPA to stay competitive in the program

COMMUNITY INVOLVEMENT

I-20 Wildlife Preserve & Jenna Welch Nature Study Center
- Maintained the walkability and appearance of the preserve through the pruning of plants, removal of debris, mulching of trail, and watering of plants
- Led a group of 15 volunteers to clear space for viewing area
- Responsible for opening and closing of preserve

George W. Bush Childhood Home
- Provided tours of the historic presidential home
- Greeted and checked in patrons

Friends of the Library
- Successfully identifying expensive items of interest in donation such as rare vinyl records, books, magazines, textbooks (etc.) to be sold online, an estimated total of $10,000+
- Used knowledge of classics, philosophy, and art history to simplify and organize shelves by year, author, and subject within genre, informed patrons about books

Museum of the Southwest
- Guided children learning sessions during STEM spring break camp

Recording Library of West Texas
- Recorded audio of written content for those who are blind

- Clear and concise speaking for multiple hours

Salvation Army
- Sorting of donated items
- Shelving of sorted items

SKILLS

Languages: C, C++, C#, Java, Javascript, TypeScript, Python, SQL, HTML, CSS, SCSS, Dart
Frameworks: React JS, Flutter, Bootstrap 5
Tools: Git, Github, Jira, SSMS, IIS, Visual Studio, VS Code, Google Collab, Deepnote, Node.JS, Linux