

Nathan R. Perez

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EDUCATION

University of Texas at Dallas

Bachelor of Science of Computer Science | **3.8 GPA**

Jan 2023- May 2025

Midland, TX

Midland College

Associate of General Studies | **4.0 GPA**

Jan 2021- Dec 2022

Midland, TX

TECHNICAL & TEACHING EXPERIENCE

Software Development Intern

Tyler Technologies

May 2023 - Aug 2023

Plano, TX

- 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 dialogues 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

K-12 English and Math Tutor

The Tutoring Center

Jan 2023 - Feb 2023

Carrollton, TX

- Worked with K-12 students on Math, Physics, Grammar and Compression

Mathematics Tutor

Midland College

Jan 2022 - Oct 2022

Midland, TX

- Taught and supported the development of mathematical skills in 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

Nov 2021 - Jan 2023

Midland TX

- 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 through concept questioning and clarification
- Provided intuitive ways of thinking about problems and mathematical concepts

OTHER EXPERIENCE

Receptionist / Admin support

Sep 2019 - Jan 2023

Bush Tennis Center

Midland TX

- Communicated information regarding our outreach program and nonprofit activities to patrons
- Key-holder, Worked in a fast-paced environment managing 18 tennis courts and 8 pickle-ball courts for max of 75 people in an hour
- 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
- 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

PROJECTS

HateDeception | *Python, NumPy, Pandas, NLTK*

- 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

Web Scrappers | *Python, BeautifulSoup, Requests*

- Misc. web scrappers, scrappers for NFT's / block chain data, Instagram data & Twitter

Account Aggregator | *ReactJS, JavaScript, CSS, SCSS, ReChart*

- Co-developer 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

SCHOLARSHIPS & AWARDS

2023 CMD-IT/ACM Richard Tapia Conference Scholarship | 900

UTD Transfer Scholarship & Phi Theta Kappa Scholarship | 2000 per semester

UTPB Undergraduate Research Grant | 900

UTPB Undergraduate Research Grant | 900

Friends of the Library Textbook Scholarship | 900

UTPB Transfer Elite Scholarship | 900

Legacy Scholarship | 1000

VOLUNTEER WORK

Volunteer Manager & General Labor

I-20 Wildlife Preserve & Jenna Welsh Nature Study Center

- Maintained trails and appearance of the preserve through the pruning of plants, removal of debris, mulching of trail, removal of fallen trees, and watering of plants
- Led a group of 15 volunteers to clear space for viewing area
- Responsible for opening and closing of preserve

Historical Tour Guide

George W. Bush Childhood Home

- Provided tours of the historic presidential home
- Greeted and checked in patrons

STEM camp instructor

Museum of the Southwest

- Guided children learning sessions during STEM spring break camp

Donated items sorter

Friends of the Library book store

- 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

Narrator

Recording Library of West Texas

- Recorded audio of written content for those who are blind
- Clear and concise speaking for multiple hours

Salvation Army

Warehouse staff

- Sorting of donated items
- General warehouse processing

PROFESSIONAL MEMBERSHIPS

Association Computing Machinery	2023 - Present
ColorStack	2023 - Present

SKILLS

Languages: C, C++, Java, JavaScript, Typescript, Python, SQL (Microsoft), HTML, CSS, SCSS, Dart

Frameworks: ReactJS, Node.JS, Flutter, Bootstrap 5

Developer Tools: Git, Jira, Confluence, SSMS, IIS, Linux / Unix

REFERENCES

Available upon request