

# AREDTH SANCHEZ

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## EDUCATION

### The University of Texas at El Paso

B.S. of Engineering in Computer Science; Concentration in Data Analytics, Minor in Mathematics

El Paso, TX

Expected: 2028

- **Major GPA:** 4.0/4.0 – **Honors:** Dean's List (Fall 2024, Spring 2025)
- **Relevant Coursework:** Elementary Data Structures & Algorithms, Computational Thinking, Discrete Math, Calculus 2
- **Related Clubs:** Coding Interview Club (CIC), ColorStack, Association for Computing Machinery (ACM), Society of Hispanic Professional Engineers (SHPE)

## EXPERIENCE

### Software Developer Intern

May 2025 – July 2025

El Paso Water

El Paso, TX

- Engineered Azure Virtual Agents using Microsoft Azure and Azure AI services, integrated structured knowledge bases (PDFs, SOPs) and created Azure AI Search index schemas using JSON to enable natural language retrieval of Drainage System Design Manual documentation and rainfall measurement data. Supported internal automation reducing manual work by 70%, and enhanced customer-facing AI interactions.
- Automated workflows with Power Automate, SharePoint, and Python, managed and updated Azure Search Agent knowledge bases in real time to ensure virtual agents delivered current and accurate content.
- Collaborated with cross-functional Agile teams to gather requirements, conduct user interviews, and implement backend automation, enhancing virtual agent accuracy, scalability, and operational efficiency.

### Apprenticeship

May 2025 – June 2025

Cornell Break Through Tech Fellow

El Paso, TX

- Selected from over 1,000 applicants for the Break Through Tech Sprinternship™ program; completed a competitive paid apprenticeship, worked under the mentorship of professional data scientists and software engineers to gain hands-on experience with real-world technical projects and strengthen industry readiness early in my computer science education.
- Completed technical training workshops in Data Structures, Machine Learning, JavaScript, Python Scripting, and Git through Cornell University.
- Participated in industry-style technical and behavioral mock interviews with Break Through Tech Software Engineer mentors, where I gained practical interview experience and the confidence necessary to perform in a professional setting.

### IT Technician

Jan. 2023 – March 2025

Blu Capital Startup

El Paso, TX

- Provided technical support for internal systems and users, diagnosing and resolving hardware, software, and network issues to maintain uninterrupted daily operations. Managed account setup and permissions across platforms including Windows, Google Workspace, and Microsoft Teams, troubleshooting user access and platform issues for the startup team. Contributed to the deployment and maintenance of the company's IT infrastructure, setting up employee workstations, installing and configuring operating systems, applications, and hardware to support operational efficiency and scalability in a fast-paced startup environment.

## PROJECTS

### AutoPay: Automated Invoice & Payment System | Java, Spring Boot, MySQL, HTML, CSS, JavaScript, Twilio

- Developed a Java-based full-stack invoice management system using Spring Boot, MySQL, and a web interface built with HTML, CSS, and JavaScript. Users can create, view, and manage invoices through a responsive GUI.
- Automated invoice generation and calls clients via Twilio IVR to collect payment details, integrating real-time voice interactions with backend processing to simplify billing and reduce manual workload.

### Drug Dosage Prediction Model | Python, Scikit-learn, Pandas, NumPy, Matplotlib

- Developed a logistic regression model in Python to predict optimal drug dosage for hospitalized patients using clinical and demographic data. Utilized Scikit-learn for model training and achieved 81% prediction accuracy. Used Pandas and NumPy for data preprocessing and manipulation.
- Visualized data trends and model performance using Matplotlib. Validated the model on patient datasets to ensure accurate and personalized dosage recommendations, supporting improved treatment outcomes.

### Pokemon Clash Game | Java, Windows PowerShell command line

- Engineered a text-based Pokémon game in Java with a menu-driven interface, featuring object-oriented design across Pokemon, Trainer, and Region classes to simulate dynamic team management and wild encounters.
- Implemented robust file parsing, input validation, and array-based data structures to handle user interactions, error handling, and in-game operations such as capturing Pokémon, viewing stats, simulating fights, and managing trainer teams.

## TECHNICAL SKILLS

**Languages:** Python, C++, Java, JavaScript; **Frameworks:** React, Spring Boot, Flask; **Libraries:** Pandas, NumPy, Matplotlib, Scikit-learn, Blender (in-progress); **Tools/OS:** MySQL, HTML, CSS, Twilio, Excel, Git, GitHub, VIM, VS Code, IntelliJ, Jupyter Notebook, Linux, Windows