Sivon Pearson

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Diligent and detail-oriented with a strong foundation in software development, algorithms, and data structures. Seeking an internship or entry-level position to apply technical skills to and contribute to innovative projects.

Education

THE UNIVERSITY OF TEXAS AT DALLAS Richardson, Texas
Bachelor of Science in Computer Science Fall 2022 - Spring 2025

- Cumulative GPA: 3.939 / 4.000
- 4-Year AES Engineering Scholarship Recipient
- Expected Graduation Date: May 16th, 2025

Professional Experience

Growth Acceleration Partners | *Internship - Python Engineer* **December 2024 - Present**

- Developed an app which uploads conversations from Slack company-side deal channels as notes to HubSpot deals every 24 hours.
- Utilized Flask and Slack Bolt to allow communication between the application and both Slack and HubSpot.
- Hosted the application on a Microsoft Azure Web App and related application information on a Microsoft Azure SQL Server.

Skills used: Microsoft Azure Web App, Microsoft Azure SQL Server, Python, Flask, Slack Bolt, HubSpot API, HubSpot CRM, GitLab

Growth Acceleration Partners | *Internship - Python Engineer* **June 2024 - August 2024**

- Collaborated with an Agile team of engineers to develop a chatbot for company-use, facilitating the lookup of company policies and related information.
- Stored company policy documents and other documents in AWS S3.
- Developed a Python script to process documents in a Chroma vector database with Hugging Face embeddings for fetching certain documents based on queries asked by users to an app on Slack.
- Utilized Flask and Slack Bolt to allow the Slack API to communicate with the Python script.
- Used model Mixtral-8x7B from AWS Bedrock to translate relevant document fragments from a ChromaDB relevance search to a digestible form.
- Hosted the Python script in a source image on AWS App Runner and deployed to AWS ECR with Docker.
- Established permissions with AWS IAM and set keys with AWS SecretsManager.
- Attempted using Slack SDK, AWS EC2, AWS EFS in early implementations.

Skills used: AWS AppRunner, Docker, AWS Bedrock, ChromaDB, HuggingFace Embeddings, Python, Flask, Slack Bolt, AWS DynamoDB, AWS IAM, GitLab

Technical/Computer Skills

Languages: Java • JavaScript • C • C++ • C# • Python • MIPS • Prolog • Racket • RStudio • Bash • SQL
Web Technologies: TypeScript • CSS • React • Vite • Next.js • Tailwind • Styleguidist • Cypress
Databases: MySQL • DynamoDB • MongoDB
Frameworks & Tools: AWS • Azure • Unity3D • Blender 3D • Audacity • Docker
Collaboration Tools: Confluence • GitHub • GitLab • Slack • Trello
Operating Systems: Windows • Unix
Python Libraries: NumPy • OpenCV • TensorFlow • PyTorch • Pandas

Relevant Coursework

Data Structures and Algorithms ▪ Software Engineering ▪ Database Systems ▪ Advanced Algorithm Design/Analysis ▪ Machine Learning
Automata Theory ▪ Introduction to Computer Vision ▪ Computer Networks ▪ Discrete Mathematics ▪ Computer Architecture
Computer Architecture ▪ Probability and Statistics ▪ Digital Logic and Computer Design ▪ OS Concepts

Academic Projects/Personal Projects

Climate-Change Forecasting Tool | UTD Senior Project **2025 - Present**

- Leading a team of peers to design and develop a climate-change forecasting web tool in order to predict the severity of climate-related disasters in the future using historical data.
- Developing a backend in Python which houses a Temporal Fusion Transformer (TFT) and multiple APIs from which to fetch data to train the TFT.
- Developing a frontend in JavaScript which houses an interface to interact with the model to make predictions about the severity of climate-related disasters in a specific region and at a specific time in the future.

Skills used: Python, Machine Learning, PyTorch, Lightning AI, Flask, JavaScript

Movie Rating Guessing Game | Web Development **2025 - Present**

- Developing a game where users must guess the IMDb rating of a random movie, given a number of the movie's attributes, such as its title, poster, plot, release year, etc.
- Designed a backend to fetch movie data from the OMDb API, which is queried by movie title with a random word from the random-words npm package.
- Used the node-vibrant npm package to extract colors from the current movie's poster image for frontend styling.

Skills used: TypeScript, React, Vite, Tailwind CSS, CSS, GitHub, Vercel

Snake Game and Neural Networks | Neural Network Modeling and Testing **2024 - 2025**

- Coded the game Snake with a binary implementation and coded a genetic neural network that uses ReLU activation in hidden layers and SoftMax activation in the output layer.
- Trained the model by randomly changing the network's parameters slightly over multiple generations.

Skills used: Python, NumPy

Highway Racing Game/FPS Car Game | Game Design **2022 - 2024**

- Coded physics-based game in Unity where the player races through traffic with cars that are directed by algorithms to maintain a certain route.
- Modeled vehicles, environment, animation in Blender 3D.
- Designed sounds in Audacity.

Skills used: Unity, C#, Blender, Audacity

Minesweeper and 2D Game Engine | Game Design **2021**

- Built and coded a game engine and GUI for Minesweeper.

Skills used: Java

Related Extra Curricular Projects

UTD Trends | Club Programming Project **2023 - 2024**

- Worked with Nebula Labs to program UTD Trends, a tool that compiles historical course data for students to use to plan which classes to take and to facilitate the course registration process for students.

Skills used: JavaScript, React, Next.js, Tailwind CSS, Styleguidist, Cypress, GitHub

Extra Curriculars

Math Club, Member (2022-2023)
Elderly Care Landscaping Volunteer (2019-2023)
FRC Robotics 'ausTIN CANs 2158', Coding Department Member (2020-2022)