William Phong

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WORK EXPERIENCE

Data Science Intern Jun 2025 – Aug 2025
Tensor Therapeutics *San Diego, CA*

- Applied machine learning techniques to accelerate drug discovery processes
- Utilized Boltz-2 to generate predictive models for RNA structures and molecular interactions
- Developed and deployed a scalable variant calling pipeline using Sarek (nf-core), Nextflow, and Docker for genomic data analysis
- Configured, managed, and scaled virtual machines on Azure and Lambda.ai, implementing secure networking and SSH access to support efficient remote workflows

PROJECTS

VR Earth Orbit Simulation

- Written in C# to develop mathematically accurate real-time simulations and data calculations for orbits and sun insolation
- Collaborated with Dr. Kostadinov to implement research on Earth's orbit, Milankovitch cycles, and insolation
- Solves an educational issue explaining astronomical concepts by providing a visual, hands-on VR experience

Spotify Day List Word Cloud

- Written with Python, MatPlotLib, and shows words weighted by occurrence
- Provides users automatically generated word clouds over time based on Spotify day list titles
- Utilizes Spotify API for OAuth 2.0 code flow to obtain user information
- Uses AWS RDS Postgres DB to store JSON data

Formula1 Result Prediction Algorithm

- Uses Python to implement linear and multinomial regression formulas to predict results based on qualifying data
- Data is imported/exported to a Postgres database and visualized with MatPlotLib

Portfolio Websites (waphong.com, craniumknight.com, kwauche.com)

- Written using Next.js, HTML, CSS, Typescript, and deployed using Vercel
- Implements NextAuth for Postgres DB, Google, and Spotify OAuth integration
- Utilizes Prisma and NEON Postgres DB to store and transfer data

Discord Bot

- Created a responsive Java Discord bot used by over 200 people
- Deployed 24/7 on an EC2 instance using Docker, utilizes YouTube-DL and FFmpeg to play audio
- Integrates word cloud project functionality with commands

Student Portal Application

- Interviewed faculty admin and students of CSUSM to determine a customer story and requirements
- Conducted agile and scrum scheduling, wrote SRS and project documentation
- Developed front-end app with Java and Android Studio
- Implemented MySQL database and connector to communicate data and SHA256 to encrypt user data

EDUCATION

San Diego State University May 2027
Master of Science in Computer Science

California State University San Marcos Aug 2024
Bachelor of Science in Computer Science

- **Honors**: Cum Laude, Deans List Spring 2023 & 2024

SKILLS

Languages: C++, C#, Python, Java, SQL, JavaScript, HTML, CSS, Typescript
Frameworks: React, Node.js, MatPlotLib, Pandas, jQuery, Flask, Django, JUnit
Developer Tools: Git, Amazon Web Services, Google Cloud, Vercel, Docker