Geralt Heart

Austin TX | geraltheart01@gmail.com | 956-802-1359 | github.com/GHeart01 | linkedin.com/in/geraltheart001 | geraltheart.com

EDUCATION

University of Colorado Boulder | GPA: 3.9/4.0 — ***Expected May 2027***
Master of Science in Computer Science — Boulder, CO

University of Texas Rio Grande Valley | GPA: 3.5/4.0 — ***July 2017 – May 2020***
Bachelor of Science in Applied Mathematics — Edinburg, TX

Blinn College | GPA: 4.0/4.0 — ***June 2024 – Dec 2024***
Associate of Science in Computer Science — Bryan, TX

South Texas College | GPA: 3.5/4.0 — ***Aug 2014 – Dec 2017***
Associate of Science in Engineering — McAllen, TX

PROJECTS

Regression Testing Framework | *python, pytest, GitHub Actions*
https://github.com/GHeart01/tile-gps-regression-testing

- Designed 52 automated unit and regression tests covering 4 system modules (TILE, EMQuest GPS, Spectra Python, and Aurora systems) achieving 100% test validation with execution time under 0.1 seconds.
- Validated Android GPS module functionality including location accuracy, signal strength, and RTK/DGPS compatibility.
- Implemented Python 3.9+ integration tests for ancillary state and data persistence, data serialization, JSON validation, and configuration management
- Created CI/CD pipeline using GitHub Actions with automated testing, coverage analysis, and multi-version support

Customer Segmentation & Clustering Analysis | *NumPy, pandas, seaborn, matplotlib, TensorFlow*
github.com/GHeart01/Wholesale_Customer_Clustering

- Built a customer segmentation pipeline using K-Means and Hierarchical Clustering to identify purchasing behavior patterns.
- Evaluated clustering quality using silhouette scores between multiple cluster counts, provided heatmap/pair plot visualizations to demonstrate feature relationships.
- Utilized hyperparameter tuning across several different models to evaluate and cross-validate performance.

SMS Spam Detection Analysis – Deep Learning | *NumPy, pandas, seaborn, matplotlib, SciPy*
github.com/GHeart01/SMS-Spam-Collection-Deep-Learning

- Data engineered features from raw data to gain better pivot points for analysis.
- Compared deep neural networks and LSTM networks to inform model selection decisions.
- Improved model performance and interpretability through visualization and log-transformed feature analysis.

WORK EXPERIENCE

Guest Teacher — **Aug *2025 – Present***
Kokua Education — Austin, TX

Mathematics Tutor — ***Sept 2018 – June 2024***
South Texas College / Freelance — McAllen, TX

- Performed one-on-one and group instruction for mathematics and statistics courses including College Algebra, Calculus I, II, III, Elementary Statistics, Differential Equations, and other mathematics classes.

SKILLS

Programming Languages: Python, SQL, C++, JavaScript, MATLAB
Machine Learning: Pandas, NumPy, Scikit-learn, TensorFlow, Keras, SciPy
Frameworks & Libraries: React, pytest, Three.js, GSAP
Databases: PostgreSQL, MySQL
Cloud & DevOps: AWS Lightsail, Docker, Kubernetes