Michael Pasala

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EDUCATION

Glenda Dawson High School
GPA**:** 4.0 unweighted *2018 - 2022*
Honors**:** Valedictorian, National Merit Finalist

The University of Texas Austin Bachelor of Science in Computer Science
GPA: 4.0 Bachelor of Science in Mathematics
Minor in Philosophy of the Mind and Language

TECHNICAL SKILLS

- **Stanford**–*Machine Learning Certification* Aug 2022
  - Utilized MATLAB to implement models/topics from supervised and unsupervised learning while also learning best practices
- Languages: **Java, SQL, Python, MATLAB, Javascript, HTML, CSS,**
- Frameworks/Tools: **Pytorch, Tensorflow, React, Flask, Firebase, AWS S3, DeepLabCut, OpenCV, Pandas, Numpy**
- Relevant Coursework: Data Structures, Applications of Lin. Algebra, Discrete Math, Multivariable Calculus, Comp. Architecture

EXPERIENCE

- **Lee Lab**–*Researcher* Sep 2022 – Dec 2022
  - Automated the segmentation of experiment videos into subclips based on the detection of a light source.
  - Creating a solution using computer vision for identifying distinct rat behavior: rearing, feeding; Python, Pytorch.

- **Monfils Memory Lab**–*Researcher* Dec 2022 – Present
  - Developed an algorithm for identifying/ labeling discrete-sized animal clustering.
  - Developing software and procedure to automatically conduct multi-animal analysis from video
  - Analyzing individual velocity, distance, and approach behavior from animal-behavior experiments: Python, DeepLabCut
  - Writing procedure and scientific paper over findings.

- **Texas Guadaloop Hyperloop Research & Engineering–***Data Analyst* Feb 2023 – Present
  - Integrating and maintaining all of the business team and engineering teams' data onto AWS in order to streamline and organize data storage, analysis, and export.
  - Building a website for the team to display team achievements, important data, and culture; Wordpress
  - Analyzed team demographics data to inform future recruiting decisions and for a fundraising pitch

- **EPIS Health**–*Web Designer* Aug 2022 – Nov 2022
  - Designing and managing a low-cost, simple, yet effective website for a small mental-health counseling startup
  - Leveraging Wordpress to construct a website in the founder's vision; https://epishealth.com/

ACHIEVEMENTS

- **Hack the Future–**Hackathon: SeedWise **Overall Most Creative Hack** Mar 2023
- **Future Problem Solvers: International's Grand Champion**; State Grand Champion x2 *2020-2022*

PROJECTS

Github: https://github.com/MichaelP84/Projects

- **Farm-ML–***HackTexas Hackathon https://devpost.com/software/festivity-on-the-farm*
  - Developed a KNN model to optimize farmer crop yield given various environmental variables to help farmers adjust to changing world weather conditions.
  - Deployed a machine learning model on a light-weight web application using Flask, HTML, CSS

- **Capstone Research Paper**; *Random Forest Model for Comparison of Twitch Streamer Performance*
  - Implemented Random Forest regression, in Tensorflow, on multivariate Twitch streamer data, with Pandas, to research its efficacy in the context of social media analysis; 95% accurate at ± 10 ranks.
  - Wrote a corresponding research paper and presented the findings to a College Board approved board, with oral defense

- **Twitter's Effect on Stock Price**
  - Developed a LSTM model to predict stock prices while accounting for populous influence; TensorFlow
  - Engineered time-specific sentiment-analysis data (Vader-sentiment model): tweets gathered from Twitter posts about the company Apple with AAPL stock trading data; Pandas