Noel Elias

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EDUCATION

THE UNIVERSITY OF TEXAS AT AUSTIN

BS in Computer Science
BS in Mathematics
May 2025 | Austin, TX

SKILLS

PROGRAMMING

Over 5000 lines:
Python • Java • C/C++
Over 1000 lines:
MATLAB • Javascript • SQL • HTML/CSS
Familiar:
C# • R

TOOLS/FRAMEWORKS

AWS • Scikit • OpenCV • TensorFlow • Unity • Git • Android Studio

LINKS

Github:// **noele2**
LinkedIn:// **noel-elias**
Portfolio:// **noele2.github.io**
Google Scholar://**profile**

COURSEWORK

UNDERGRADUATE

Data Structures
Linear Algebra
Honors Vector Calculus
Discrete Mathematics
Computer Architecture
Number Theory
Operating Systems
Algebraic Structures

CERTIFICATIONS

Deep Learning Sequence
Machine Learning
Cryptography I
MATLAB for Quantitative Analytics
Computer Security

AWARDS

• 50/300000 globally - Kaggle Housing Prices ML Contest
• Finalist - TXSEF - 2020
• 1st Place - Austin Energy Science Fair Competition - May 2020
• Bronze Medal - International Genetically Engineered Machine Competition - 2018

EXPERIENCE

APPLIED RESEARCH LABRATORIES | Machine Learning Intern

Jan 2022 - Present | Austin, TX

- Built and deployed binary, one-class, and siamese **machine learning pipelines** for various passive sonar data distributions.
- Developed **novel denoising algorithm** for extracting spectrographic signatures from noisy audio signal data.
- Working on submitting research to top computer vision conferences

THINKERY | Software Engineering Intern

Nov 2018 - August 2021 | Austin, TX

- Led the development and production of an AR app implementing MIT Media labs computational thinking strategies to teach students programming.
- Implemented Vuforia Augmented Reality SDK for feature tracking and detection, Unity Scripting APIs in **C# and JavaScript** for 3D animations, and Android Studio for the building the app framework.

ELLINGTON RESEARCH LAB | Undergraduate Research Intern

Jan 2018 - August 2020 | Austin, TX

- Worked on various research projects under **Dr. Andrew Ellington** using SciPy and scikit-learn libraries to conduct interpolations, multidimensional image processing, and amplification classifications on amplification results.
- Built automated web scrapping tool in Java to run genomic sequencing on viable primers sets for LAMP amplification research that were published and presented at the **international iGEM conference**.

PROJECTS

MULTI-THREADED WEB SERVER | Concurrency, Server Optimization

- Built multi-threaded HTTP Web Server in **C and Rust** by safely implementing thread pools to reduce response time with concurrency.
- Implemented asynchronous **optimized HTTP requests** and evaluated scaling performance by deploying unit tests in testing pipeline
- **Used:** Rust & C, POSIX Threads, C Socket-Lib, Rust Thread & TCP API

TEXAS COVID-19 WEB APP | Deep Learning, Web Development

- Created, tested, and validated **LSTM neural networks**, DBSCAN unsupervised clustering algorithms, and regression algorithms to create models to predict the spread of COVID-19 using a variety of contributing factors with a **92%** accuracy.
- **Used:** AWS (EC2, S3 storage, and Elastic Beanstalk), TensorFlow, scikit-learn, Heroku, Dash, cron

KAGGLE - CONTRIBUTOR | Machine Learning, Data Science

- Modeled large data sets in global competitions using accurate machine learning models to solve problems.
- **Used:** TensorFlow, SciKit-learn (Support Vector Machines, KMeans), Pandas, SQL, Seaborn, Jupyter Notebooks, Numpy, Matplotlib