Eric Gonzalez

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EDUCATION

Florida Atlantic University — Boca Raton, FL
Master of Science in Artificial Intelligence — Graduating: August 2023
GPA: 3.5/4.0
Bachelor of Science in Computer Engineering — Graduated: May 2022

TECHNICAL SKILLS:

Programming Languages:
Python (Numpy, Pandas, SKLearn, Matplotlib, Keras, TensorFlow) | Embedded C | C++ | R | SQL
Tools:
GitHub | Microsoft Office (Word, Powerpoint, Excel, Teams) | Visual Studio Code | Code Composer Studio | Arduino IDE | PostgresQL | PgAdmin | Jupyter Notebooks | Sage Math | VirtualBox | Google Colab | Jira | WEKA | Orcad Pspice | Winspice | R cloud studio
Professional Certificates:
Comptia – A+ certification (December 2022) | Kaggle – Intro to Deep Learning (6/26/2022) | Kaggle – Intro to Machine Learning (6/19/2022) | Kaggle – Computer Vision (7/6/2022) | Certificate in Data Science from Florida Atlantic University (5/17/2022) | Pursuing Comptia Network+ and Security+ (In progress and expected: 3/2023 & 8/2023)
Skills:
Agile Software Development | Team Software Collaboration | Group Leadership | Team Management | Public Speaking | Public Presentations | Front Desk
Languages:
Fluent in the written and oral communication of English | Read and write Spanish as a second language at an intermediate level

ACADEMIC PROJECTS:

COMPUTER SCIENCE/ENGINEERING:

Implementation of ECDH Diffie-Hellman Key Exchange via C programming
(Introduction to Cryptographic Engineering, Fall 2022)

- Built common cryptographic functions like SELECT, MOD_ADD, MOD_MULTIPLY, MOD_SUBTRACT, MOD_EXP, KEY_GEN, SS_GEN, RECOVERY_Y, over the first weeks of the course
- Implemented POINT versions of the functions for the ECC implementation
- Points were 256 bits represented in radix-16 with R being a 512 bit number

Smart Stethoscope Senior Project (*EGN 4952C: Engineering Design 1 & 2, Fall 2021 & Spring 2022***)**

- Built a low-cost, Bluetooth connected stethoscope for telemedicine project using ESP32 microcontroller and INMP 441 MEMs microphone with companion app for remote recording, viewing, and diagnosing
- Awarded People's Choice Award for most relevant design

Agile Software Development *(Principles of Software Engineering, Fall 2021)*

- Participated in the agile software development process with a group of other students using Jira and Scrum to design and implement a positive, uplifting, and moderated website. On the website users could form threads and initiate chat rooms with mental health professionals at low costs

MACHINE LEARNING AND ARTIFICIAL INTELLIGENCE:

Bandits Single and Multi-arm Problem *(Reinforcement Learning, Summer 2022)*

- Using Reinforcement Learning to explore Exploitation vs Exploration paradigm

Grid World, Grid World with Neural Network and Deep Learning *(Reinforcement Learning, Summer 2022)*

- Explored the reinforcement learning algorithms of Q-Learning, SARSA, Monte Carlo Search, TD, and TD Lambda

Classification problems using Deep Learning *(Deep Learning, Summer 2022)*
(Introduction to Deep Learning, Fall 2021)

- Deep Learning models for Binary classification of 0's and 1's, Multiclass classification for digits 0-10 using MNIST and CIFAR-10 datasets
- Hyperparameter tuning and overfitting reduction using drop out layers, transfer learning, 10 fold Cross Validation, L1 and L2 regularization, data split via hold out, data augmentation, and early stopping

Exploration of ISLR dataset *(Intro to Data Science, Spring 2021)*

- Linear Regression on housing and tuition prices, cross-validation, LASSO, Ridge Regression, KNN, subset selection

Explored Advanced Machine Learning using a Lymphoma Dataset via WEKA
(Advanced Machine Learning and Data Mining, Fall 2022)

- Explored machine learning classifiers like Bayes decision stumps, decision trees, J48 CART classification algorithm
- Reported on cost sensitivity, effects of meta-learners such as bagging & AdaBoostM1 on error rates/ accuracy
- Reported on the efficacy of filtering on redundant/irrelevant features
- Studied imbalances in datasets and the means for rectifying the imbalanced data via sampling

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WORK EXPERIENCE

Zuccarelli's Italian Restaurant, Pompano Beach, FL, Driver, Server, Cashier, July 2011-July 2020
Answered phones, operated POS system, served tables, delivered food
Rainbow Insurance, Margate, FL, Customer Service Representative, August 2018- January 2019
Managed existing client car insurance policies, set up new accounts, answered inquiries about policy coverage
Little Groom and More, Margate, FL, Manager, September 2017- January 2018
Managed payroll/inventory, washed dogs, handled reception area

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RELEVANT COURSEWORK :

Practical Aspects of Modern Cryptography | Computer Data Security | Design & Attack Sec. Embed Sys | Intro to Cryptographic Engineering | Deep Learning | Adv Machine Learning and Data Mining| Reinforcement Learning| Neural Networks | Artificial Intelligence Bootcamp | Cyber Security Bootcamp | Intro to Artificial Intelligence | Intro to Deep Learning | Intro to Data Science | | Intro to Machine Learning and Data Mining | Object-Oriented Design and Programming | Principles of Software Engineering | Engineering Design | Intro to Database Structures | Design/Analysis of Algorithms | Intro to Microprocessor Systems | Stochastic Models for CS | Intro to Logic Design | Foundations of Computer Science | Intro to Programming in C |Intro to VLSI | Embedded Systems | Electronics | Circuits | Structured Computer Architecture

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ACTIVITIES:

FAU NSF STEM Scholars Program Boca Raton, FL
Member *Fall* 2021 – Present
Participates in an NSF funded program to introduce academically distinguished students to careers and education in Artificial Intelligence through weekly meetings discussing the latest developments in AI with attendance from members in the industry. FAU Association of STEM

Society of Hispanic Professional Engineers (SHPE) Boca Raton, FL
Member *Spring* 2021 – Present
SHPE changes lives by empowering the Hispanic community to realize its fullest potential and to impact the world through STEM awareness, access, support, and development.

American Mensa Member
Member *Spring* 2012 - Present
The American Mensa society seeks to identify and foster human intelligence for the benefit of humanity. Encourage research in the nature, characteristics, and uses of intelligence. Provide a stimulating intellectual and social environment for members.