Luke Emad Fahmy

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EDUCATION

University of California, San Diego
B.S, MATHEMATICS-COMPUTER SCIENCE
June 2020

ACHIEVEMENTS:
Provost Honors in Fall 2016 and Spring 2017 (GPA above 3.5) | "A" in all college writing courses

PROJECTS

Basketball Trajectory: Application in OpenCV/Python that predicts the trajectory of a basketball shot using just camera data from YouTube videos. Involved segmentation, shape detection, and trajectory prediction. Can be viewed at the website at the top of this resume.
ML Paper : Experiment/comparison of various ML algorithms on different kinds of data from the UCI repository. Involved Naïve Bayes, KNN, Random Forest, SVMs, and sklearn.
AA: Different version of popular mobile game "AA" built with Processing.

WORK EXPERIENCE

NIWC, PACIFIC – STUDENT CONTRACTOR for TEST/INTEGRATION TEAM
March 2019 - Present | San Diego, CA

- Working on an XML adapter to translate various data forms into Stallion GOTS data format
- Working on modeling and simulation of network traffic for more thorough and streamlined testing
- Working on network automation via python and bash for faster network configuration and optimization of routine network tasks

UNLIMITED LEARNING – TUTOR
October 2017 – Present | San Diego, CA

- Tutoring high school and college students in various mathematical and scientific/engineering topics, as well as in programming and computer science

ENGINEERING FOR KIDS – TEACHER
October 2013 – August 2017 | Orange County, CA

- Instructing classrooms from ages K-12 in conducting scientific experiments
- Aiding in design of experiments focused in the areas of robotics, programming, & circuitry

RELATED COURSES

Object-Oriented Programming (Java)
Discrete Mathematics
Advanced Data Structures (C, C++, Java)
Intro to Data Science (Python)
Calc I, II, III, IV Differential Equations
Intro to Probability
Numerical Analysis: Linear (Matlab)
Data Structures & OO Design (C, C++)
Software Tools and Techniques Comp Org & Architecture (C, ARM)
Modern Computer Vision (Python, Matlab)
Intro to Machine Learning (Python)
Linear Algebra
Graph Theory, Combinatorics
Numerical Analysis: Non-Lin., approx. (Matlab)

SKILLS & ACHIEVEMENTS

PROGRAMMING/MARK-UP LANGUAGES:
Java, C, C++, Python, Matlab, Javascript, HTML+CSS, XML, Processing

SPECIALITIES:
Variety of math and mathematical thinking, computer vision, analytical writing

OTHER TECHNOLOGIES/FRAMEWORKS:
OpenCV, Unix/Linux, VirtualBox, some Cisco