TROY L. CRAWFORD

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EDUCATION

THE UNIVERSITY OF GEORGIA - TERRY COLLEGE OF BUSINESS, Athens, GA 2020 - 2021
MS - Business Analytics | GPA: 3.92 | Summa Cum Laude | IBM Data Science Practitioner Certified

THE UNIVERSITY OF GEORGIA - FRANKLIN COLLEGE OF ARTS & SCIENCES, Athens, GA 2016 - 2020
BS - Computer Science & Physics | GPA: 3.75 | Magna Cum Laude | Dean's List Recipient

TECHNICAL SKILLS

- Programming Languages: Python, C++, C, R, MySQL, Java(FX), SAS/SPSS, HTML/CSS, JavaScript, PHP, Fortran
- Frameworks: Machine Learning – [Keras, TensorFlow, PyTorch, Numpy, Pandas], WebDev – [Spring MVC, Bootstrap]
- Other: Git, Tableau, Exploratory, AWS S3, Signavio, LaTeX, Spyder, Eclipse, XCode, Visual Studio, R Studio, MS Office

EXPERIENCE

CATERPILLAR INC., Athens, GA 2020 - 2021
Data Scientist - Capstone Consultant

- Developed valuable market simulators using R and Python to assist in predicting associated time series data
- Applying statistical modeling and ML algorithms to project final net realization values of Caterpillar products which increases predictive accuracy and in turn assists accounting in properly reporting earnings at the end of each month

STOCK SCRAPER - PERSONAL PROJECT, Athens, GA 2020 - 2021
Data Analyst, Database Engineer, ML Architect - Creator

- Scraped, managed and analyzed more than six gigabytes of stock price data with the end goal of constructing LSTM neural networks, CNNs and other predictive models to create a portfolio that outperforms the S&P 500 by 5%
- Estimated stock prices of interest from both technical and fundamental indicators including social media sentiment

UGA SMALL SATELLITE RESEARCH LAB, Athens, GA 2019 - 2021
Flight Software Engineer - Team Member

- Wrote flight software in C++ and Python for the Multi-view On-board Computational Imager's ADCS component
- Integrated Unity, a unit testing framework, working within a team of five software engineers, see smallsat.uga.edu

AEVEX AEROSPACE, Quincy, MA 2020 - 2020
Software Engineer - Intern

- Leveraged various ML techniques to monitor wildfire spread and corresponding monetary damage to buildings in real time at more than 50 fps from aerial footage, spanning over 2544 sq. km.
- Trained the state-of-the-art YOLOv5m model, a type of CNN, upwards of 100 times on varying hyperparameters
- Combined object detecting neural networks and geospatial data manipulation in order to provide the latitude and longitude coordinates of wildfire spread to AEVEX's 3D visualization software, resulting in a demo for a client

UGA PHYSICS & ASTRONOMY RESEARCH GROUP, Athens, GA 2019 - 2020
Physics Researcher, Software Engineer - Primary Author

- Published a research paper on de-excitation rate coefficients for proton and carbon collisions by using Fortran code

CAMPUS AND COMMUNITY INVOLVEMENT

Associate Member, ACM / Data Dawgs / Data for Good / Deep Learning at UGA, Athens, GA 2018 - 2021

- Contributed to and attended roundtable discussions as well as seminars on various computing, data-related and deep learning principles and topics vastly increasing both interest and knowledge for the world of data

Student Participant & Team Member, **UGAHacks 5 & 6 / HackGT 6,** Athens/Atlanta, GA 2019 - 2021

- Constructed an iOS application in Swift by using object detection to increase everyday recycling at HackGT 6
- Utilized MySQL, C++ and an Arduino to prototype a device designed for determining air quality at UGAHacks 5
- Won NCR challenge by developing a Chrome extension aimed at assisting local businesses at UGAHacks 6

Associate Member, **Pi Kappa Phi,** Athens/Atlanta, GA 2017 - 2020

- Accrued over $20,000 to benefit Children's Healthcare of Atlanta, which provides specialized pediatric care, through partnership with UGA Miracle