YANALL BOUTROS

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Chico, CA

EDUCATION

University of California, Santa Cruz September 2016 - August 2020

- Bachelor of Science (B.S.) Physics, B.S. Computer Science. Department GPA 3.40
- Electives: Advanced Programming, AI, Computational Physics, Quantum Computing

TECHNICAL STRENGTHS

Data Visualization, Artificial Intelligence (AI), Predictive Modeling , Simulations, Tex, HTML, Selenium Web Scraping, Data Analysis, Numpy, TensorFlow, Research, Quantum Algorithms, Logistic Regression, Minimax, Alpha Beta Pruning, Graph Search and Traversal Algorithms, Problem Solving, Debugging, Testing, Modeling, Statistics, Data Structures, Markov Chains, Logic Programming, Machine Learning, Back End Engineering, Git, GitHub, Regex, Docker, Python, C/C++, Unix, GNU/Linux, Scientific Communication, Mathematics, ViM, SciPy, Monte Carlo Simulations, Software Design, Lab Equipment, Data Validation, Matplotlib, Constraint Satisfaction Problems (CSP), Python-Constraint, Dynamic Programming

EXPERIENCE

Self Employed November 2020 - January 2021
Contract Data Recovery Services *Chico, CA*

- Built and maintained a High Performance Computer [HPC] to brute-force attack an encrypted file
- Determined computational feasibility by deriving combinatorics from unique client information
- Wrote custom Haskell code to brute-force private key

Santa Cruz Institute for Particle Physics August 2018 - August 2020
Undergraduate Research Assistant Intern *Santa Cruz, CA*

- Simulated interactions/events in the Large Hadron Collider
- Conducted research categorizing events with Machine Learning. Written in Python 3
- Implemented feed-forward and convolution neural networks. Explored hyper-parameter study
- Streamlined, benchmarked, and dockerized Python workflow and modules for simulating particle physics
- Trained new research assistants in Python 3, provided technical support

University of California, Santa Cruz September 2019 - November 2019
Back end Engineer - Senior Project in Software Engineering *Santa Cruz, CA*

- Attended Scrum meetings, maintained kanban boards, practiced principles of agile development
- Hosted web app, automated web scraping and data delivery, debugged front-end

University of California, Santa Cruz April 2019 - June 2019
Undergraduate Researcher - Senior Project in Computational Physics *Santa Cruz, CA*

- Created a 2D Ising model Monte Carlo simulation as an NxN lattice of spin-up/spin-down particles
- Animates and demonstrates quantitatively and qualitatively at what k_bT a phase transition occurred

REFERENCES

References include professors I have worked or researched with and will be provided upon request