

YANALL BOUTROS

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www.GitHub.com/Yanall-Boutros

<https://yanall-boutros.github.io/>

EDUCATION

University of California, Santa Cruz

September 2016 - August 2020

- Bachelor of Science (B.S.) Physics and B.S. Computer Science. GPA 3.4

TECHNICAL STRENGTHS

Expert

Python, C/C++, Unix, GNU/Linux, Scientific Communication, Mathematics, Problem Solving, Debugging, Testing, Modeling, Statistics, Data Structures

Intermediate

Logic Programming, Markup languages, ViM, Git, GitHub, Machine Learning, Docker, Data Visualization, Artificial Intelligence (AI), Data Wrangling, Regex, Selenium Web Scraping, Data Analysis, Numpy, TensorFlow, Research, Matplotlib, Monte Carlo Simulations, Software Design, Lab Equipment, Data Validation, Markov Chains, Predictive Modeling, Simulations, Interpersonal Skills

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 and recover 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

- Conducted research categorizing events with Machine Learning, from data created by simulating interactions in the Large Hadron Collider. Written in Python 3
- Proposed different artificial neural network architectures such as feed-forward and convolution neural networks. Explored hyper-parameter study
- Benchmark Python workflow for particle physicists by streamlining and packaging various tools such as Pythia, Pyjet, and TensorFlow. Unified and Dockerized Modules
- Trained new research assistants, provided technical support

University of California, Santa Cruz

May 2019 - June 2019

Undergraduate Researcher - Senior Project in Computational Physics

Santa Cruz, CA

- Created a 2D Ising Model Simulation with varying definitions for an adjacent site
- Animates the behavior of an NxN lattice of spin-up or spin-down particles in a Monte Carlo simulation
- Demonstrates quantitatively and qualitatively, via graphs and animations, at what k_bT a phase transition occurred

REFERENCES

References will be provided upon request