Cameron MacKeen, PhD

Data Scientist
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Data scientist seeking a position that incorporates problem solving with the opportunity to contribute creatively. Versatile and articulate polymath with proven leadership skills and an affinity for collaboration.

Skills

Articulate, Critical Thinker, Meticulous, Rational, Creative, Collaborative, Focused, Ambitious, Dynamic, Pragmatic

Programming: Python (pandas, scikit-learn, sqlalchemy, tensorflow, flask) · **Linux shell scripting**
R (Rattle) · **SQL** · **C++** · **MATLAB** · **Mathematica** · **Javascript** · **Jekyll**

Work Experience

X-ray Absorption Fine Structure Graduate Researcher

UNIVERSITY OF CALIFORNIA, SANTA CRUZ — DR. FRANK BRIDGES *June 2014 - March 2019*

- Analyzed interference patterns of the X-ray absorption fine structure, developed physical model using high parameter fits.
- Meticulously collected and processed data, then removed background with command line software and Linux shell scripts.
- Wrote program in Python for data processing and developed an automated analysis framework with Python to optimize pipeline.
- Derived a new method for extracting a statistical parameter of atom with unknown distribution.

Data Scientist

SERACARE LIFE SCIENCES — LORN DAVIS *May 2016 - September 2016*

- Used AWS and cleaned large data sets; began with an analytical overview of historical test data and imputed sparse features.
- Extracted pertinent data features and developed a random forest model coupled with economic incentive.
- Presented results and strategy to realize potential economic benefit with preliminary testing of predictions.

Elastic Net Regression with DNA

UNIVERSITY OF CALIFORNIA, SANTA CRUZ — DR. ARTEM SOKOLOV *July 2015 – October 2015*

- Collaborated on a project to explore machine learning research used to predict the presence of certain types of breast cancer.
- Elastic net regression was employed on a learning set of DNA sequences, and referenced a nodal graph of prior information.
- Analyzed prediction success for various pathway weighting schema using R; identified the best database for predictions.

Decision Tree Analysis of an Interactive Online Module

CONCORD CONSORTIUM — DR. HEE-SUN LEE *January 2015 – May 2015*

- Utilized Python to parse and clean log data of students' interactions with computer module.
- Learned R to use Rattle for statistically analyzing data and developed a binary decision tree model to categorize students.
- Results were compiled in a manuscript for future use and development.

Characterizing Avalanche Photodiode Gain Undergraduate Researcher

UNIVERSITY OF MASSACHUSETTS, AMHERST — DR. ANDREA POCAR *April 2010 – June 2013*

- Erected an ultra-high vacuum manifold with a liquid nitrogen plumbing system to cool avalanche photodiodes.
- Constructed a circuit to bias photodiodes, collected data and engineered temperature control system.
- Wrote C++ scripts to interface with circuit board and analyze signal as a function of voltage and temperature.

Education

University of California, Santa Cruz *2013 – 2019*

PH.D. IN PHYSICS

- Published 6 papers (3 first authors) and collaborated internationally.
- Awarded Chancellor's Dissertation Fellowship.
- Trained multiple students in lab technique and analysis, delegated research tasks, assisted students on individual projects.

University of Massachusetts, Amherst *2009 – 2013*

B.SC. IN PHYSICS AND MATH

- Submitted Honors Senior Thesis on research, received an Honors grant and Cervo fellowship.