

Charles Stahl

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EDUCATION

Princeton University, Princeton, NJ

May 2018

A.B. Candidate; Major: Physics

GPA: 3.84

Intended Certificates: Applications of Computing, Applied and Computational Mathematics

Coursework includes: Classical Mechanics; Quantum Mechanics; Introduction to Relativity;

Advanced Electromagnetism; Quantum Field Theory; General Computer Science; Complex Analysis

HONORS

Allen G. Shenstone Prize in Physics

June 2017

Princeton University award for excellence in course work and promise in independent research.

Manfred Pyka Memorial Prize in Physics

June 2016

Princeton University award for excellence in course work and promise in independent research.

Goldman Sachs Quant Quest, Winning team

April 2016

Wrote Python code to create similarity matrix for S&P 500 companies using the text of their Wikipedia articles. Analyzed data using natural language processing.

RESEARCH EXPERIENCE

Research Assistant, Astrophysics Department, Princeton University

Summer 2017

Worked with Professor James Stone on Athena++, a hydrodynamics simulation code. Extended Athena++ using C++ to include thermal diffusion. Tested the code and the extension using analysis of the Kelvin-Helmholtz instability.

Junior Independent Work, Physics Department, Princeton University

Spring 2017

Worked with Professor Herman Verlinde on the spectrum of the SYK model, a small quantum model. Performed matrix calculations using Python to find ground states and entropy of the model.

Junior Independent Work, Physics Department, Princeton University

Fall 2016

Worked with Professor Suzanne Staggs on methods of determining sources of B-mode polarization in the Cosmic Microwave Background. Wrote code in Python to analyze data generated algorithmically with the scientific computing package CAMB. Differentiated between magnetic and other sources.

Research Assistant, Data-Intensive Computing REU, Clemson University

Summer 2016

National Science Foundation funded program for undergraduates in data-intensive computing. Worked in the PERSIST lab, focusing on embedded systems and small computational devices. Extended a Java-based hardware simulator to make use of recorded natural conditions.

Research Assistant, Physical Chemistry Department, University of Wisconsin, Milwaukee

Summer 2015

Participated in research group's weekly meetings discussing experiments to measure internal electric fields in the Heme group through the Stark Effect. Worked independently on a Matlab program to analyze spectral data from the Stark experiment.

SKILLS

Computer: Java, C, Mathematica, Matlab, LaTeX, Python

Language: Working proficiency in writing and speaking Spanish

ACTIVITIES

Tutor for Sophomore-level Physics and Computer Science courses

Fall 2017

Princeton Varsity Men's Cross Country, Indoor and Outdoor Track teams, Member

Fall 2014-Fall 2016