Daniel McNeela

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EDUCATION

UNIVERSITY OF CALIFORNIA, BERKELEY

B.A. in Applied Mathematics
College of Letters and Sciences
Aug. 2012 - May 2017 | Berkeley, CA

SAN DIEGUITO ACADEMY

High School
Aug. 2009 - Jun. 2012 | Encinitas, CA

LINKS

Github:// **mcneela**
LinkedIn:// **daniel-mcneela**

COURSEWORK

IN PROGRESS

Efficient Algorithms and Intractable Problems
Data Science
Deep Reinforcement Learning
Database Systems

COMPLETED

Graduate Topology and Analysis
Neural Computation
Numerical Analysis
Mathematical Logic
Computational Linguistics
Natural Language Processing Research Seminar
Honors Multivariable Calculus
Honors LinearAlgebra and Differential Equations
Honors Abstract Algebra
Real Analysis
Complex Analysis
Advanced Linear Algebra
Structure and Interpretation of Computer Programs
Introductory Neuroscience
Organic Chemistry
Physics: Mechanics
Physics: EM

TECHNICAL SKILLS

PROGRAMMING

Proficient
Python • Matlab • Git • LaTeX • Javascript • Jekyll
Familiar
C • Java • NLTK

EXPERIENCE

INTERNATIONAL NEUROINFORMATICS COORDINATING FACILITY | Software Engineer - Google Summer of Code

- Developed tools for scientific visualization using Matplotlib and Plotly.
- Wrote 10,000 lines of code in Python and Javascript.
- Rewrote the core module using object-oriented principles, paring thousands of lines of code down to an equivalent few hundred.
- Implemented and created visualizations of a variety of neural computational models such as the Hopfield Network, Restricted Boltzmann Machine, and McCulloch-Pitts Neurons.
- Implemented the Sammon Mapping non-linear dimensionality reduction algorithm, and provided visualizations for the Locally Linear Embedding and related algorithms.

ELITE EDUCATIONAL INSTITUTE | Mathematics Instructor

- SAT Preparation
- ACT Preparation
- ISEE Preparation
- AP Calculus tutoring

UC BERKELEY CS 61A | Undergraduate Tutor

- Led weekly supplemental course sections
- Assisted in the development of section teaching materials

PROJECTS

PERSONAL WEBSITE | HTML, CSS, Javascript, Jekyll, Ruby

Developed in 2016

- Implements a Jekyll backend
- Templating via Liquid
- Implemented a custom reading feed using a Ruby script to access the GoodReads API

CHIP-8 EMULATOR | Python 3, Tkinter

Developed in 2015

- Emulator of the Chip-8 virtual machine run on some of the very first personal computers such as the Cosmac VIP and Telmac 1800.
- Developed a GUI in Tkinter
- Implemented hardware instructions in Python code

SCHEME INTERPRETER | Python 3

Developed in 2013

- Interpreter for the functional language Scheme.
- Course project for CS61A at UC Berkeley.

AWARDS

2012 National Merit Finalist
2012 National AP Scholar
2012 Rensselaer Medal