

Derek Fulton

STUDENT · SEEKING EMPLOYMENT

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I am a Master's Student of Computational Biology at the University of Cambridge seeking full-time opportunities starting from October 2019

Education

University of Cambridge

Cambridge, UK

MPHIL IN COMPUTATIONAL BIOLOGY

Oct 2018 - Aug 2019

- Studying statistical genomics, mathematical modeling and machine learning for image processing
- Graduation in August 2019

University of North Carolina at Chapel Hill

Chapel Hill, North Carolina, USA

BSC IN QUANTITATIVE BIOLOGY

Aug 2014 - May 2018

- Honors College
- Cumulative GPA: 3.0

Experience

UNC Department of Biology (Dr. Kerry Bloom)

Chapel Hill, North Carolina, USA

COMPUTATIONAL BIOLOGIST

May 2016 - PRESENT

- Accelerated the pace of research dramatically by designing high-throughput, automated pipeline for analysis of massive amounts of image data
- Used parallel computing to run Chromoshake, a **C++** mathematical model of cell division to make insightful predictions about the cellular biophysics of cell division

University of Cambridge Department of Applied Mathematics and Theoretical Physics (Dr. Stephen Egle)

Cambridge, UK

SUMMER RESEARCH FELLOW

May 2017 - Aug 2017

- Built an online, interactive statistical explorer in **R** of neuroscience data to improve ease of collaboration among neuroscience researchers worldwide

UNC Eschelman School of Pharmacy (Dr. Alex Tropsha)

Chapel Hill, North Carolina, USA

UNDERGRADUATE MACHINE LEARNING ENGINEER

Dec 2017 - PRESENT

- Building a protein-ligand pose scoring function using a convolutional **neural network** using **Keras** with the hopes of dramatically accelerating the pace of computational drug discovery for researchers worldwide
- Training the network on a dataset of 13,000 protein-ligand pairs (PDB Bind) with experimentally measured binding affinities

Personal Project

Swap Drop Enroll

Chapel Hill, North Carolina, USA

CREATOR

Jan 2016 - Jan 2017

- Created website and system that automatically enrolls UNC students into high-demand classes the instant a vacancy opens up
- Consulted for UNC Vice Chancellor of Information Technology by providing data on class demand

Honors and Awards

Boeing and UNC Kenan-Flagler Business School

Chapel Hill, NC, USA

BOEING INNOVATION FELLOW

May 2017

- Won a 2,500 dollar award for ideating and presenting the concept of a smart waste bin that classifies food waste based on spectroscopy
- Prepared and gave a 10-minute presentation to Boeing Executives about the financial feasibility of the concept

Skills

- Fluent in Spanish, native in English
- Semi-professional musician in several instruments
- Competitive collegiate squash player

Writing

Satirist

DAILY TAR HEEL

Chapel Hill, NC, USA

Sep 2017 - Feb 2018

- Wrote some hilarious bits for the greatest campus newspaper of all time, The Daily Tar Heel
- Also wrote some longer columns on serious campus issues