

Yuhuan Qiu

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EDUCATION

CORNELL UNIVERSITY | BS IN COMPUTER SCIENCE, MINOR IN OPERATIONS RESEARCH

Expected May 2018 | Ithaca, NY

Cumulative GPA: 3.851 • Major GPA: 4.0

Relevant Coursework :Functional Programming • Database Systems • OO Programming • Discrete Structures • Systems Programming
• Data-driven Web Apps • Intro to Analysis of Algorithms • Bioinformatics Programming

EXPERIENCE

CORNELL COMPUTATIONAL BIOLOGY | UNDERGRADUATE RESEARCHER

Aug 2016 – Present | Ithaca, NY

- Develop and maintain XWAS, an open source software package built on PLINK for analysis of thousands of genomic datasets, its millions of variants, tailored for the X chromosome.
- Implement academic statistical algorithms, bug fixes, and enhancements. Perform GWAS/association analyses.
- Scripting in python, shell, and R, running analysis on a linux computing cluster.

CORNELL COMPUTER SCIENCE DEPARTMENT | TEACHING ASSISTANT

Aug 2016 – Present | Ithaca, NY

- Hold weekly office hours for Discrete Structures - CS 2800.
- Answer student questions on Piazza, an online discussion forum.
- Grade problem sets, exams, and proctor exams.

CHILDREN'S MERCY HOSPITAL | SUMMER RESEARCH SCHOLAR

May 2016 – July 2016 | Kansas City, KS

- Applied statistical tests in an exome-seq meta-analyses of over 150 individual genomes to find the basis of Acute Respiratory Disease Syndrome. Discovered several SNPS and genes for ARDS severity and outcome.
- Scripted primarily in python with pandas/numpy and bash/sh, running analyses on a linux computing cluster.

PROJECTS

CLUB CAML IM Nov-Dec 2016

- An Asynchronous Slack/IRC inspired instant messaging client and server system.
- Implements the STOMP messaging protocol from scratch.
- Extended features include a chatbot, pm's, and an extensible two player game interface.

2584 Dec 2016

- A fibonacci variant of the popular game 2048. Implemented monadically with board and logic both as monads.

PANDORABOTS API WRAPPER Nov 2016

- An OCaml wrapper for interfacing with the Pandorabots API.

CORNELL ELECTRIC - BIG RED HACKS Sept 2016

- A web app to visualize Cornell's energy consumption in real time in respect to source.
- Built with Python and the flask web framework, and Javascript to scrape for the relevant online energy data to build a heat map using the Google Maps API.

COURSE PROJECTS 2016

- OCalf Interpreter - Interpreter for a subset of the OCaml language. Evaluates and type infers, implemented by the Hindley & Milner algorithm, expressions.
- Search - Search for text documents. Answers word-related queries by building an inverted index. Scales up to documents of tens of thousands of words.
- TAG - Text Adventure Game Engine. Robust adventure game engine in OCaml. Playable with any JSON data file adhering to schema.

LANGUAGES

PROGRAMMING

OCaml • Java • Python • Javascript • HTML • CSS

OTHERS

MySQL • PostgreSQL • GNU/Linux • Vim • Eclipse

AWARDS & OTHERS

Dean's List all semesters

National Merit Scholar

National AP Scholar

SAT: 2360 (CR: 790, MATH: 770, WR: 800)