

Education

Rice University

- Computer Science, graduating May 2021, GPA: 3.21

Fall 2017 - present
Houston, TX

Westwood High School

- GPA: 4.0/4.0 (5.58/5.0 weighted), Graduated May 2017

Fall 2013 - 2017
Austin, TX

Conference Presentations

PyoFuel: Using Python and Pathway Tools to engineer synthetic biofuel

Sole Author

[more](#)

Dec 2016
Colorado

- Int'l. Soc. for Computational Biology / Rocky Mountain Bioinformatics Conference (poster session)

Projects

Lentil - A Musician's Feedback Service

Independent Project

[repo](#)

[demo](#)

Summer 2018 - present

- Conceive, design, and implement a web-based musician feedback service (ReasonML + React)
- Musicians submit recordings of performances and receive pointed feedback from teachers

Physics Sunset

Independent Project

[repo](#)

[demo](#)

Summer 2017

- Design and implement browser-based interactive graphical simulation of a physics problem (ReasonML)

Disease Transmission Analysis

Spring 2018

- Design and implement rooted-directed minimal spanning tree algorithm (Python)
- Analyze genetic + epidemiological data from 2011 disease outbreak to infer the disease transmission tree

DNA Sequence Alignment

Spring 2018

- Design and implement DP solutions to two DNA sequence alignment problems (Python)
- Align human and fruit-fly protein sequences to identify the PAX domain within the "eyeless" gene

Phylogenetic (Evolutionary) Trees

Spring 2018

- Infer the optimal evolutionary tree, given DNA sequences for the leaf taxa (Python)

Hidden Markov Models and Part-of-Speech Tagging

Spring 2018

- Implement statistical learning of HMM using training corpus of pre-tagged sentences (Python)
- Implement Viterbi algorithm to assign part-of-speech tags to new sentences using trained HMM

Chef Arduino

Independent Project

[repo](#)

Fall 2010-2011

- Conceive, design, build, and program an Arduino-based robot to test properties of food samples

Software Development Skills

Programming Languages & Frameworks

2013 - present

- Proficient: Python, Java, ReasonML/OCaml, React
- Basic: C, Racket, Pyret, Elm, Html, Numpy

Software Design

2013 - present

- Systematic Program Design - Designing Data & Functions, EdX course based on HtDP2
- Functional programming with types

Software Testing

2017 - present

- Elements of test-driven development
- Python testing using Pytest, Java testing using JUnit Jupiter

Work Experience

UT Austin Summer Research Academy - College of Natural Sciences

Summer Intern

Summer 2015, 2016
Austin, TX

- DNA extraction, splicing, and recombineering of the DHX35 gene using E. coli
- Worked with Dr. Al Mackrell in the Vertebrate Interactome Mapping Lab
- Conducted computational Flux Balance Analysis on cyanobacteria engineered for biofuel

Organizations and Activities

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|---|---------------------|
| • CSters: Women in Computer Science, Rice University | Fall 2017 - present |
| • CS Club, Rice University | Fall 2017 - present |
| • Society of Women Engineers (SWE), Rice University | Fall 2017 - present |
| • SASE: Society of Asian Scientists and Engineers, Rice University | Fall 2017 - present |
| • Club Tennis, Rice University | Fall 2017 - present |
| • Music: sing, record, perform, take lessons more more | 2007 - present |
| • PyLadies: Austin community of women Python programmers, team programming, presentations | 2015 - 2017 |