Ashley D'Souza

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■ [Home](#) ■ [Blog](#) ■ [Github](#) ■ [LinkedIn](#)

Education

Rice University
- BS Computer Science, graduating May 2021, GPA: 3.41

2017 - present
Houston, TX

Work Experience

OpenStax *Backend Development Intern - Biglearn team*
- Built Rails application with automated testing to handle two endpoints for Biglearn (RoR)
- Transitioned Biglearn to Aurora Serverless for scalability with load-testing & autoscaling (AWS, AWS Aurora)
- Worked in team of 8 interns to build & pitch note-taking app integrated with OpenStax (Google API, Django)

Summer 2019
Houston, TX

Rice University, Dept. of Computer Science *Teaching Assistant*
- TA for Reasoning about Algorithms: lead office hours and discussion of labs, homeworks

Fall 2019
Houston, TX

Awards

Rewriting the Code *Fellow* [more](#)
- US/Canada-wide competitive award for females in CS: coaching, networking educational programming

2019 - present
US/Canada

PyoFuel: Using Python and Pathway Tools to engineer synthetic biofuel *Sole Author* [more](#)
- Int'l. Soc. for Computational Biology / 2016 Rocky Mountain Bioinformatics Conference (poster session)

Dec 2016
Colorado

Software Development Skills

Programming Languages & Frameworks
- Proficient: Python, Java, C, Ruby, RoR, Git, Linux, AWS, ReasonML/OCaml, React
- Basic: Elm, Racket, Pyret, Html, Hasura's Postgres + GraphQL

2013 - present

Software Design and Testing
- Typed functional programming, object-oriented design, databases and distributed systems
- Test-driven development, unit & property-based tests, Pytest, JUnit 5 & QuickTheories, RSpec

2013 - present

Projects

Lentil - A Web-Based Musician's Feedback Service *Independent Project* [repo](#) [demo](#)
- Develop full-stack application for use by musicians and teachers (ReasonML, React, Postgres)
- Musicians submit recordings and receive feedback on specific points in recording

2018 - present

Physics Sunset *Independent Project* [repo](#) [demo](#)
- Designed and implemented browser-based interactive graphical simulation of physics problem (ReasonML)

2017

Hidden Markov Models and Part-of-Speech Tagging (NLP)
- Implemented statistical learning of HMM using training corpus of pre-tagged sentences (Python)
- Used Viterbi algorithm to assign part-of-speech tags to new sentences using trained HMM

2018

Disease Transmission Analysis from Outbreak Data
- Inferred disease transmission tree from disease outbreak genetic/epidemiological data using RDMST (Python)

2018

Phylogenetic (Evolutionary) Trees
- Inferred evolutionary tree given DNA sequences for leaf taxa and plausible mutations (Python)

2018

Organizations and Activities

- CSters: Women in Computer Science, Rice University — 2017 - present
- CS Club, Rice University — 2017 - present
- Society of Women Engineers (SWE), Rice University — 2017 - present
- Club Tennis, Rice University — 2017 - present
- Music: sing, record, perform, take lessons [soundcloud](#) [youtube](#) — 2007 - present