Ashley D'Souza

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Education

Rice University   2017 - present
- BS Computer Science, graduating May 2021, GPA: 3.6/4.0   Houston, TX

Work Experience

HubSpot   *Software Engineering Intern*   Summer 2020
- In progress   Remote

OpenStax   *Backend Development Intern - Biglearn/Tutor team*   Summer 2019
- Built Rails application with automated testing for two Biglearn endpoints (4,000 students/semester)   Houston, TX
- 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)

Rice University, Dept. of Computer Science   *Teaching Assistant*   Fall 2019
- TA for Reasoning about Algorithms: lead office hours and discussion of labs, homeworks, and exams   Houston, TX

Software Development Skills

Programming Languages & Frameworks
- Proficient: Python, Java, C, SQL, Ruby on Rails, Git, Linux, AWS
- Basic: Elm, JavaScript, HTML, React, ReasonML/OCaml, Hasura's Postgres + GraphQL

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

Projects

Lentil - A Web-Based Musician's Feedback Service   *Independent Project*   repo   demo   2018 - present
- Develop full-stack application for use by musicians and teachers (ReasonML, React, Postgres)
- Musicians submit recordings and receive feedback on specific points in recording

Physics Sunset   *Independent Project*   repo   demo   2017
- Designed and implemented browser-based interactive graphical simulation of physics problem (ReasonML)

Hidden Markov Models and Part-of-Speech Tagging (NLP)   2018
- 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

Disease Transmission Analysis from Outbreak Data   2018
- Inferred disease transmission tree from disease outbreak genetic/epidemiological data using RDMST (Python)

Awards

Rewriting the Code   *Fellow*   more   2019 - present
- US/Canada-wide competitive award for females in CS: coaching, networking educational programming   US/Canada

PyoFuel: Using Python and Pathway Tools to engineer synthetic biofuel   *Sole Author*   more   Dec 2016
- Accepted for 2016 Rocky Mountain Bioinformatics Conference (poster session)   Colorado

Leadership and Activities

- Public Relations Director and member of Club Tennis, Rice University   2017 - present
- CSters: Women in Computer Science, Rice University   2017 - present
- CS Club, Rice University   2017 - present
- Society of Women Engineers (SWE), Rice University   2017 - present
- Music: sing, record, perform, take lessons   soundcloud   youtube   2007 - present