Kelsey D'Souza

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Education

Columbia University, School of Engineering and Applied Science
New York, NY
Expected May 2018

- BS in Computer Science / Intelligent Systems, Minor in Applied Math
- Cumulative GPA: 3.6, Major GPA: 3.7

Programming Languages

- Highly proficient: Python, Elm • Proficient: Java, Javascript, Ocaml, HTML • Basic usage: C, C++, SQL, Matlab

Publications & Awards

Delphix Technology Scholarship for Women   *more*
Menlo Park, CA
December 2015

- Winner of Delphix 2015 Annual Technology Scholarship for Women

PySTEMM: Executable Concept Modeling for K-12 Learning   *Sole author*   *more*
Brussels, Belgium
August 2013

- Proceedings of the 6th European Conference on Python in Science (EuroSciPy 2013)
- Independently developed Python-based concept modeling tool to assist STEM learning

Columbia Ebola Design Challenge Finalist   *Sole Developer*
New York, NY
Sept - Dec 2014

- Finalist (fourth and final round) of a four-month long hackathon addressing the Ebola outbreak

Work Experience

Google   *Engineering Practicum Intern*
New York, NY
Summer 2016

- Worked with Core and Cloud team on streamlined collaborative version control and testing system
- Developed desktop and browser app for the system from scratch in Elm (FP) and Javascript

Columbia University, Computation in Python: COMS1006   *Teaching Assistant*
New York, NY
Fall 2015 - present

- Weekly office-hours, guide recitations, design problem sets, under Dr. Adam Cannon

Columbia University, Discrete Mathematics: COMS3203   *Teaching Assistant*
New York, NY
Spring 2016

- Weekly office hours, debug program submissions, and guide recitations under Dr. Salleb-Aouissi

Enthought Scientific Computing   *Software summer intern*
Austin, TX
Summer 2015

- Developed interactive data visualizer for Canopy data-analysis platform (MatPlotLib, Pandas, Seaborn)
- Worked in large live GitHub repository on individual feature branch and opened bug fix branches

Project Experience

EboHub: Ebola/Infectious Disease Surveillance System   *Sole Developer*   *repo*   *demo*   *more*
New York, NY
2014 - 2015

- Led diverse team of 5, built system for mobile healthcare workers doing disease surveillance
- Used Python/Postgresql web service with 2-way SMS-based mobile and web interfaces
- Columbia Ebola Design Challenge finalist, partnered with There Is No Limit Foundation in Guinea

Assembly Language Simulator in Elm   *Sole Developer*   *repo*   *demo*
New York, NY
Fall 2015

- A single-page Elm application for an interactive Assembly Language Simulator

Executable domain models   *Personal Project*
New York, NY
Fall 2015

- Model and simulate course concepts using Elm to solidify understanding

Adaptive 'Smart' Stroller   *Lead Developer*   *repo*
New York, NY
2014 - 2015

- Built stroller-attachable baby monitor with 2-way SMS communication with parent
- Arduino for sensors, Python/Raspberry-Pi for communication, Python for SMS and web server
- Used serial port (Arduino-to-Pi), HTTP (Pi-to-server), and SMS (server-to-phones)

PySTEMM: K-12 STEM Education Tool   *Sole Developer*   *repo*
Austin, TX
2012 - 2014

- Created and developed Python-based concept modeling tool
- Presented work at 6th Annual International SciPy Conference in Brussels, Belgium

MIT/SeaGrant Ocean Engineering Experience   *Project and CS Lead*
Cambridge, MA
Summer 2012

- Led 4-student team, built submersible ROV to monitor power plant effluents in river
- Designed, built and tested with minimal guidance, on time and within budget

Activities

- Girls who Code: Teaching Assistant   2015-present
- Society of Women Engineers: Family member and house member   2014-present
- Women in Computer Science: Member   2014-present
- Application Development Initiative (ADI): Member   2014-present
- Engineers Without Borders, Uganda Chapter: Board Financial Chair, Engineering team   2014-2015

Personal Traits

- Love Computing • Critical Thinking • Self-starter • Teamwork • Communication • Hard Working