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 — Menlo Park, CA, December 2015

- Winner of Delphix 2015 Annual Technology Scholarship for Women

PySTEMM: Executable Concept Modeling for K-12 Learning *Sole author* — 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* — 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* — 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* — 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* — 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