Sam Fox Royston
sfoxroyston@gmail.com
http://samroyston.com
https://github.com/PorkShoulderHolder

EDUCATION:

NYU Courant Institute, New York, NY	MS, Computer Science 2014 – 2016
Lewis & Clark College, Portland, OR	BA, Mathematics 2008 - 2012
Bronx High School Of Science, Bronx, NY	2004 - 2008

EXPERIENCE:

Breather, NYC, ML Engineer   June 2017 –
- Responsible for design and implementation of production ML systems as well as the design and validation of ML models for real-estate pricing

R/GA, NYC, Senior ML Engineer   Sept. 2016 – June 2017
- Application of machine learning and predictive modeling to ad-buying optimization as well as problems related to natural language processing and computer vision

NYU, Tandon School of Engineering   Summer 2016
Research Associate
- In research group of Prof, Rumi Chunara. Worked on a mobile application for collecting and analyzing contextual data relevant to public health and policy research

NYU, Courant Institute New York, New York   Spring – Summer 2016
Research Assistant
- Worked in research group of Prof. Lakshmi Subramanian on applying machine learning to problems in mobile health care technology (type-1 diabetes), and low cost hardware design for pollution monitoring in developing regions.
- Worked with researchers in the Vision, Learning, and Graphics group on VR data visualization

Betaworks, New York, New York   Summer 2015
Data Science Intern
- Researched and evaluated sampling methods for social networks
- Built an end-to-end platform for transforming large-scale network data into 3D graph layout visualizations capable of displaying over 10,000 nodes and 100,000 edges
- Designed and evaluated a recommendation engine based on collaborative filtering

Wieden + Kennedy, Portland, Oregon   Feb. 2014 – Sep. 2014
Software Engineer
- Worked with account managers, creative directors, planners, and producers to prioritize and execute on new creative tech ideas for major clients like Old Spice, TurboTax, and Chrysler
- Lead researcher and engineer on indoor localization R&D project; completed a whitepaper on algorithm design, a robust working implementation, and a front end for real-time visualization

Sahelien.com, Bamako, Mali   April 2013 - Present
Co-Founder / Head of Technology
- Helped grow Sahelien to a leading regional news source with 16 full time employees across Mali, Burkina Faso, and Niger

Uncorked Studios, Portland, Oregon   Sep. 2012 - Sep. 2013
Software Developer
- Wrote audio proc. engine for Silver Pencil winning Perfect Pop iOS app, with >100K downloads
- Implemented critical features of Webby Award winning LEGO Movie Maker iOS app, with >1M downloads

SKILLS:

[Programming Languages]: **Main** - python, C++, javascript, C, objective C, bash. **Limited** - lua, C#, java, scala
[Spoken Languages] English (native), Spanish (conversational)
[Machine learning / scientific computing]: numpy, torch, scipy, opencv(c++), scikit-learn, igraph, pandas, statsmodels, matlab, cvx, mathematica
[Graphics / Visualization / Interactivity]: html5 canvas, three.js, mapbox, d3.js, OpenGL, WebGL, unity, OpenFrameworks, gephi, GEAR VR
[Hardware / IOT Prototyping]: Experience with PCB Layout / EAGLE, esp8266, RTOS, attiny and atmega chips, nrf24l01, arduino, as well as prototyping basics – soldering and logic analysis
[Full stack - Server / Cloud / DB]: nginx, docker, redis, MongoDB, AWS EC2/S3, gcloud, postgres
[Other things I'm comfortable with with]: unix systems, vim, git, LaTex, iOS development

AWARDS / APPEARANCES:

MS Innovation fellowship, Courant Institute, Spring 2016
Guest speaker at Lewis & Clark summer mathematics colloquium – July 2014
Creative work featured on ChromeExperiments.com – December 2013
Pi Mu Epsilon National Honors Society for Mathematics – Inducted spring 2012
Presenter at Pacific Coast Undergraduate Math Conference
Soloist with Lewis and Clark orchestra – Performed Rachmaninoff's 2nd Piano Concerto - April 2011
Lewis and Clark piano scholarship 2009-2012

INTERESTS / ACTIVITIES:

I am interested in the intersection of machine learning, data visualization, network science, and ubiquitous computing.

Mobile Health – Research on pervasive computing and data science applied to type-1 diabetes
Machine Learning – I am broadly interested in problems related to sensor data from embedded systems and robotic control. In addition; inference problems posed in the domain of network science
Data Art / Visualization – Some of my visualization projects: historical chess (.pgn) archives, real-estate data, Walt-Whitman's correspondence, election data, branching Brownian motion, board game combinatorics, BGP routing tables, and web/VR platforms for network visualization.
Piano – Recordings are available on my website.

PUBLICATIONS:

A Collaborative Untethered Virtual Reality Environment for Interactive Social Network Visualization. Sam Royston, Connor DeFanti, and Ken Perlin – (preprint)
http://arxiv.org/abs/1604.08239