



EDUCATION

Columbia University in the City of New York, *Expected graduation May 2019.*
BA Candidate, Major in Computer Science, Concentration in History.

WORK EXPERIENCE

ARiSE Lab at Columbia University, New York
Researcher, 9/2018 - Present

- Studying the use of machine learning in program analysis in collaboration with Computer Science faculty
- Performing experiments involving machine learning models, code clone detection, and similarity analysis
- Preparing results for publication on security vulnerability detection in source code with machine learning

Center for Spatial Research at Columbia University, New York
Developer and Research Assistant, 9/2016 - Present

- Using React Native to research peer-to-peer protocols (DAT), sensor networks, and data sharing
- Created web maps and data visualizations with Python and Javascript (Node.js, D3.js, p5.js)
- Built custom CMS for management of a MongoDB database by non-technical users
- Collaborated with teams including developers, architects, linguists, and urban planners
[<http://c4sr.columbia.edu>] [https://centerforspatialresearch.github.io/colombia_site/]
[<https://beyond-the-census.herokuapp.com>]

Computer Science Department at Columbia University, New York
Teaching Assistant, 9/2016 - Present

- Introduction to Data Visualization with Professor Agnes Chang
- Introduction to Computer Science and Programming in Java with Professor Adam Cannon
- Supported professors by hosting office hours to guide and advise students

Brown Institute for Media Innovation at Columbia University, New York
Developer and Research Assistant, 2/2018 - 7/2018

- Built the website and data visualization for a collaborative research project between the graduate schools of Architecture and Journalism
- Project promoted by WYNC on 93.9FMNY and in print online by Gothamist
[<https://canners.nyc>] [<https://brown.columbia.edu>]

Google Summer of Code
Developer, 6/2017 - 9/2017

- Worked with the Processing Foundation on p5.js
- Made major contributions to the open source codebase of p5.js-sound
- Redesignated features and refactored existing codebase for modularity
- Created new audio processing effects and an accurate timing system for audio production
- Designed APIs and implemented test suite
- Optimized features for performance and efficiency
[https://jvn.tf.github.io/gsoc_workproduct/]

WKCR-FM New York
Director of Engineering and Operations, 1/2018 - 12/2018
Radio Programmer, 5/2016 - Present

- Oversaw general equipment usage and repair of station equipment and transmission infrastructure
- Taught FCC licensing classes on live music recording, playback, and broadcasting technology
- Developed new and modern infrastructure for playing and recording music at WKCR
- Curated programming for music shows across departments (In All Languages, American, and Jazz)

ADDITIONAL EXPERIENCE

Columbia University Journal of Literary Criticism
Design Editor, 9/2016 - Present

- Led graphic and layout design team
- Used InDesign and Illustrator

The Petey Greene Program
Volunteer Tutor, 9/2016 - Present

- Worked with incarcerated youth on Rikers Island
- Assisted students with mathematics, writing, and English as a second language

SKILLS

Computer Science

Programming Languages
C, C++, Java, Ocaml,
Javascript (Native, Node.js),
Python, Ruby

Tools
Git, Unix

Web
HTML/CSS

Software

Graphic Design
Adobe Photoshop,
Illustrator, InDesign

3D Design
Rhinceros, Autodesk
AutoCAD, Blender,
Cinema4D

Music Production
Ableton Live

Music

Trumpet Player / Composer /
Producer

Fabrication

3D Printing
Laser / CNC/ Vinyl Cutting
Soldering / Welding / Sewing
Woodworking

Language

Spanish (Conversational)

COURSEWORK

Operating Systems, Compilers
Natural Language Processing,
Security Engineering, Networks,
Computer Science Theory,
Fundamentals of Computer Systems,
Linear Algebra, Discrete Mathematics

LINKS

Portfolio
<http://github.com/jvn.tf>

Linkedin
<https://bit.ly/2Ht0YCZ>