



EDUCATION

Columbia University in the City of New York,
Bachelor of Arts, Class of 2019
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/columbia_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 (React Native, Node.js), Python, Ruby

Tools
Git, Unix

Web
HTML/CSS

Software

Graphic Design
Adobe Photoshop, Illustrator, InDesign

3D Design
Rhino3D, Grasshopper, Autodesk AutoCAD, Autodesk Fusion 360, Cinema4D, Blender

Music Production
Ableton Live

Fabrication

3D Printing, Laser Cutting, CNC Milling, Vinyl Cutting, Soldering, Welding, Sewing, Woodworking

Music

Trumpet Player / Composer / Producer

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>