



EDUCATION

Columbia University in the City of New York,
Bachelor of Arts, Class of 2019
Major in Computer Science, Concentration in History.

WORK EXPERIENCE

SITU Research in Brooklyn, New York
Researcher, 7/2019 - Present

- Building high performance, custom applications in Javascript (React, D3.js, Three.js, Deck.gl, Mapbox) to visualize geographic and three-dimensional data to document and analyze spatial, social, and environmental injustice
- Preparing and curating digital assets with QGIS, CloudCompare, Blender, and Rhinoceros
- Working with small research team in house and with clients and collaborators including the International Criminal Court, Amnesty International, and UN Investigative teams
- Researching the future of architecture at the intersection of computation and fabrication

ARISE Lab at Columbia University, New York
Researcher, 9/2018 - 6/2019

- Studied the use of machine learning in program analysis in collaboration with Computer Science faculty
- Performed experiments involving machine learning models, code clone detection, and similarity analysis
- Prepared 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 - 6/2019

- Used 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 - 6/2019

- Introduction to Data Visualization
- Introduction to Computer Science and Programming in Java
- 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
- Redesigned 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://jvnft.github.io/gsoc_workproduct/]

ADDITIONAL EXPERIENCE

Columbia University Journal of Literary Criticism
Design Editor, 9/2016 - 5/2019

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

WKCR-FM New York
Director of Engineering and Operations, 1/2018 - 12/2018
Radio Programmer, 5/2016 - 6/2019

- Oversaw usage, repair, and education for station equipment
- Curated programming for music shows

The Petey Greene Program
Volunteer Tutor, 9/2016 - 12/2018

- Worked with incarcerated youth on Rikers Island
- Assisted students with mathematics, writing, and ESL

Grupo Fenix, Nicaragua
Volunteer, 10/2014 - 12/2014

- Worked with local solar artisans to build and install photovoltaics
- Designed, built, and tested solar mobile phone chargers
- Painted a community center mural

SKILLS

Computer Science

Programming Languages
C, C++, Java, Ocaml,
Javascript (React, Node.js,
Three.js, D3.js), Python,
Ruby
Tools
Git, Unix
Web
HTML/CSS

Software

Graphic Design
Adobe Photoshop,
Illustrator, InDesign
3D Design
Rhinoceros, Grasshopper,
Autodesk AutoCAD,
Autodesk Fusion 360,
Cinema4D, Blender
Geospatial
CloudCompare, QGIS
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)

TOPICS

Operating Systems, Compilers
Natural Language Processing,
Computer Networks

LINKS

Portfolio

<http://github.com/jvnft>

Linkedin

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