



## WORK EXPERIENCE

### Development Seed

*Javascript Engineer, 4/2020 - Present*

- Worked with React, Node, Mapbox GL, D3, Cypress, Python, and AWS CDK
- Built web applications to support open data, climate science, disaster relief, and humanitarian goals
- Developed human-the-loop machine learning mapping tool using WebSockets
- Created MVP for analysis of massive agricultural data
- Published as co-author in academic journal
- Managed teams collaboratively using agile methodologies  
[https://www.landcover.io/] [https://openaq.org/]

### SITU Research in Brooklyn, New York

*Software Engineer, Researcher, 7/2019 - 4/2020*

- Built high performance applications in Javascript (Node, React, D3.js, Three.js, Deck.gl, Mapbox GLJS)
- Prototyped GLSL shader for distanced based, progressive rendering of massive 3D point clouds
- Optimized data and applications to run 3D environments on minimal hardware and cellular connections
- Collaborated with journalists to document and analyze spatial, social, and environmental injustice

### ARISE Lab at Columbia University, New York

*Researcher, 9/2018 - 6/2019*

- Studied the use of machine learning in static analysis in collaboration with Computer Science faculty

### Center for Spatial Research at Columbia University, New York

*Developer and Research Assistant, 9/2016 - 6/2019*

- Built a prototype for a decentralized sensor network using React Native and the DAT protocol
- Created web maps and data visualizations with Python and Javascript (Node.js, D3.js, p5.js, Express)
- Built custom CMS for management of a MongoDB database by non-technical users  
[https://hyfa.net/] [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 - 6/2019*

- Introduction to Data Visualization, and Introduction to Computer Science and Programming in Java

### 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  
[https://canners.nyc] [https://brown.columbia.edu]

### Google Summer of Code Fellow with The Processing Foundation

*Developer, 6/2017 - 9/2017*

- Made major contributions to the open source codebase of p5.js-sound (The Processing Foundation)

## EDUCATION

### Columbia University in the City of New York,

*Bachelor of Arts, Class of 2019*

Major in Computer Science (operating systems, compilers, networks, and security)

Concentration in History

## ADDITIONAL EXPERIENCE

### Creative Time X Summit

*Workshop Presenter (with SITU Research), 11/2019*

### Columbia University Journal of Literary Criticism

*Design Editor, 9/2016 - 5/2019*

### WKCR-FM New York

*Director of Engineering and Operations, 1/2018 - 12/2018*  
*Radio Programmer, 5/2016 - 6/2019*

### The Petey Greene Program

*Volunteer Tutor, 9/2016 - 12/2018*

### Grupo Fenix, Nicaragua

*Volunteer, 10/2014 - 12/2014*

## SKILLS

### Software Engineering

*Programming Languages*

Javascript, Python,  
C, C++, Ocaml,  
Java, Ruby

*Tools*

Git, Unix, AWS CLI, Azure  
CLI, Docker

### 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

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

### Music

Trumpet Player / Composer /  
Producer

### Language

Spanish (Conversational)

## INTERESTS

Distributed Systems, Compilers  
Natural Language Processing,  
Computer Vision

## LINKS

### Portfolio

<http://github.com/jvnrf>

### Linkedin

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