

Nicholas LiCalzi

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📁 Experience

Co-Creator, Software Engineer

Feb 2021 - Jun 2021

Dendro

Dendro (getdendro.com 🌐) is an open-source, serverless monitoring framework for small, distributed applications.

- Architected and built a fully serverless, auto-scaling, streaming ETL pipeline using AWS Kinesis Data Firehose, S3, and Lambda to centralize logs and metrics from collection agents on remote nodes in a distributed system to a central AWS Timestream database (serverless time-series database).
- Built a CLI wizard for configuring and deploying collection agents on distributed servers, as well as automating hundreds of AWS API calls in deploying, listing/reviewing, and tearing down the pipeline.
- Developed a dashboard and exploration platform for querying and graphing the collected monitoring data from AWS Timestream (time-series DB) in near real-time using React, VictoryChart, and NextJS.
- Led production of our tech talk, watchable here: <https://www.youtube.com/watch?v=LukfwxWKkA> 🌐
- Authored technical case study, readable at getdendro.com/case-study 🌐

Software Engineer

Sep 2019 - Jan 2021

Self-Employed

Developed open source software, some highlighted projects include:

- **Jello**: full-stack project management app using React/Redux, an Express RESTful API, MongoDB, and more.
- **Request Bean**: an app for collecting and inspecting HTTP/webhook requests. Built with Rails, Action Cable, Active Job, Redis, and PostgreSQL.

Urban Data Scientist

Oct 2017 - Sep 2019

Kohn Pedersen Fox

- Data and geospatial analysis using the Python data science and visualization stack (sklearn, Pandas, etc.), ArcGIS/QGIS (mapping), Rhino/Grasshopper (3D design & visual programming).
- Mapping and visualization of geospatial data using Python, JavaScript (Mapbox GL), and ArcGIS/QGIS.
- Published a paper proposing an environmental performance based zoning methodology for cities: https://ui.kpf.com/s/Performance_Based_Zoning.pdf 🌐

🧠 Skills

Languages

Ruby, JavaScript, Python, Go, SQL, HTML/CSS

Frameworks

React, Redux, Rails, Express, Sinatra

Misc. Technologies

Git, Github, Linux, Node.js, HTTP, OOP, RESTful API, PostgreSQL, MongoDB, Big Data, MapReduce

Cloud

Kinesis, Lambda, S3, Timestream, CloudWatch, EC2, IAM, DigitalOcean Droplets, Heroku

🎓 Education

Software Engineering (Capstone)

2019 - 2021

Launch School 🌐

Multi-year, mastery-based software engineering curriculum, with progression gated by written exams and live coding interviews to develop problem-solving skills. Read more at launchschool.com/employers 🌐

M.S. Applied Urban Science & Informatics

2018 - 2020

New York University, Center for Urban Science and Progress

NYU CUSP is a research center dedicated to data/technology-driven solutions to urban problems, linking data science, statistics and analytics. Coursework primarily using the Python data science stack.

B.A. Metropolitan Studies

2011 - 2015

New York University

University Honors Student / Founders Day Award recipient