Alexander Sedgwick Aubuchon

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Contact Information
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Education

Northeastern University — Boston, MA
BS in Computer Science, 3.8/4.0 GPA — *September 2015 - Expected Jan 2020*

Coursework: Advanced Algorithms, Theory of Comp., NLP, Quantum Mechanics, Electronics
Extracurriculars: Tutor for Discrete Structures (2017), Upperclassman Tutor (2016)

Work Experience

Google — Sunnyvale, CA
Software Engineer Intern, Node.js Team — *May 2019 - August 2019*

Node.js, Typescript, C++
- Built a faster Node.js dependency loader. Made contributions to Node.js core.
- Worked on API design of ESM Loader Hooks in Node.js core.

ASICS Digital — Boston, MA
Data Engineer Coop, Platforms — *January 2019 - May 2019*

Python, SQL, AWS
- Diagnosed and mitigated urgent data collection breakages.
- Made significant automation and diagnostic improvements to AWS based ETL pipelines.

CERN, Compact Muon Solenoid — Geneva, Switzerland
Software Engineer & Data Analyst Coop, EMTF — *January 2018 - August 2018*

Python, React, Docker, OpenStack, C++, ROOT
- Built a platform for statistical tests comparing data quality between accelerator runs.
- Analyzed EMTF data and predicted post HL-LHC detector performance.

Draper Laboratories — Cambridge, MA
Software Engineer Coop, Machine Intelligence — *January 2017 - August 2017*

C#, Python, Matlab
- Implemented the software interface to a neuro-stimulation experimentation device.
- Performed research into the novel uses of RF sensors on the emissions of electronic devices.

MIT Media Lab — Cambridge, MA
Assistant Researcher, Changing Places — *July 2016 - January 2018*

Python, scikit, C#, Unity
- Researched ML models for quickly predicting the traffic and solar potential of a model city.
- Developed a Unity/C# application for real-time visualization of the model city.

Publications

Classification of Electronic Devices and Software Processes via Unintentional Electronic Emissions With Neural Decoding Algorithms — link — *March 2019*
Laura J. Mariano, Alexander Aubuchon, Troy Lau, Onur Ozdemir, Tomo Lazovich, John Coakley

Real-time Machine Learning Prediction of an Agent-Based Model for Urban Decision-making (Extended Abstract) — link — *July 2018*
Yan Zhang, Arnaud Grignard, Kevin Lyons, Alexander Aubuchon, Kent Larson

Computer Skills

Languages: *Extensive-* Python; Typescript; *Versed-* C#; C/C++; Racket; Java; Rust
WebDev: Node.js/npm; React; webpack; HTML/CSS
Tools: Unity; Mathematica; Photoshop; Blender (CAD); ROOT
Misc: Git; (Arch)Linux; Vim; LaTeX

Interests

Gaming; Rock Climbing; Electronics