# Johan Cervantes

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## Education

**Massachusetts Institute of Technology**, Cambridge, MA            Sept 2017 - June 2021
B.S. Computer Science, Statistics & Data Science Minor
**Coursework**: *Artificial Intelligence, Distributed Systems, Machine Learning, Elements of Software Construction, Computational Cognitive Science, Computer System Engineering, Gordon-MIT Engineering Leadership Program*
**Skills**: *Distributed systems, database schema design, ReactJS, NodeJs, Express, service deployment & monitoring, ML training / fine-tuning, Tensorflow, PyTorch, C++, Go, Python, Java*

## Experience

**Google**, New York, NY                                                            August 2021- Present
*Software Engineer L4 - Geo*
- Improved Google Maps' modeling of the world by researching real-world semantics and forming a unified model for 1st, 2nd, and 3rd party feeds.
- Augmented the data validation mechanism for Geo's central datastore, leveraging 1000s of checks to ensure billions of map entries are self-consistent and well-formed.
- Refined Geo's Knowledge Graph representation of the world via large-scale data & client migrations, easing the intake of new attributes and reducing data churn.

**CovEducation**, Cambridge, MA                                           March 2020 - August 2021
*Chief Technology Officer*
- Led ~20 engineers to build a platform that pairs college students with K-12 students in underserved communities, for free reaching over 10,000 mentors & mentees.
- Oversaw the full-stack development of the platform, including front-end development, API design, deployment, and security and mentor / mentee matching system.

**MIT Media Lab**, Cambridge, MA                                           Dec 2018 - May 2021
*Undergraduate researcher - Viral Media Group*
- Researched how subcarriers of information (e.g. facial expressions) affect our perception and understanding of the content.
- Developed a distributed stream system which listened to ~20 live video feeds, applied a series of modules (e.g. generative network style transfer, speech-to-text, etc), and generated structured output for ML training / evaluation purposes.

**Google**, Remote                                                            June 2020 - August 2020
*Software Engineer Intern - Android Auto / Assistant*
- Created an Assistant feature informing drivers how many minutes away an intermediary stop is.
- Fine-tuned the trigger condition using an intent-based understanding of the voice query
- Collaborated alongside UX engineers to design the natural language output in multiple languages.

**Google**, Remote                                                            June 2019 - August 2019
*Software Engineer Intern - Search*
- Leveraged our team's intent-based understanding of webpages to improve our query fulfillment quality.
- Built a pipeline which analyzed trends amongst billions of websites to form a hierarchy of intents.

**IBM**, Yorktown Heights, NY                                                 June 2018 - August 2018
*Software Engineer Intern*
- Developed a Python library to manage serverless microservices within IBM Cloud Services.

## Activities

**MIT Weblab**, Instructor                                              January 2020 - February 2021
- Taught ~250 students as part of MIT's accelerated web-development class, covering web fundamentals (HTML/CSS) up to a modern web stack (ReactJS, NodeJS, Firebase, etc).