# **SAM ACQUAVIVA**

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samacqua.github.io

#### **EDUCATION**

## Massachusetts Institute of Technology (MIT), Cambridge, MA

Candidate for Bachelor of Science degree in Computation and Cognition, May 2023

- Relevant coursework: Machine Learning, Algorithms, Neuroscience, Computational Thinking and Data Science
- 5.0 GPA

### RELEVANT EXPERIENCE

## MIT Computer Science and Artificial Intelligence Lab (CSAIL)

Computational Cognitive Sciences Group Researcher, May 2020 – Present

- Developed data collection platform to solve the Abstraction and Reasoning Challenge--a benchmark for abstract thinking ability in programs developed by Google's François Chollet
- Created bayesian-inferential algorithm for multi-bandit, infinite-arm, best-arm-identification problem
- Orchestrated and currently carrying out a large scale Amazon Mechanical Turk Study
- Gained experience combining program-synthesis with reinforcement learning

## St. Paul's Episcopal Church Newburyport

Head of Technology, May 2018 – August 2020

- Led development of website redesign, backend infrastructure, and security
- Enabled service live-streaming and secure online donations

#### ACTIVITIES AND EXTRACURRICULARS

## **MIT Class of 2023 Vice President**

*September 2019 – August 2020* 

Worked with university administration to plan multiple class-wide events for hundreds of students

## **MIT Track and Field and Cross Country**

September 2019 – Present

• Maintained full academic rigor while training and competing twenty hours per week, year-round

#### **PROJECTS**

#### Kandula

Written in Swift and Python, uses AWS Services

- Created API and app that enables anyone to create and customize stock-trading algorithms without code
- Hosts a plethora of trading algorithms on the cloud involving quantitative analysis, sentiment analysis, and GRU

## **Acquacchi Chess Engine**

Written in C

- Expands Alpha-Beta Search with heuristics and bit-level algorithms
- Evaluates 1.5 million positions per second

#### Dare

Written in Swift and Objective-C, uses Google Cloud

- Social media app that revolves around completing "dares" instead of posting updates
- Data stored in NoSQL as a trial of how far non-relational data can be pushed