# Annie Bryan

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## EDUCATION

**Massachusetts Institute of Technology (MIT)** — **Cambridge, MA**
*B.Sc., Double major in Computer Science and Mathematical Economics; Minor in Spanish* — *Expected May 2022*
**GPA:** 4.9 / 5.0
**Courses:** Computer System Engineering, Software Construction, Computation Structures, Embedded Systems, Algorithms and Data Structures, Artificial Intelligence, Machine Learning, Linear Algebra, Differential Equations, Calculus, Probability and Random Variables, Real Analysis, Microeconomics, Macroeconomics, Econometric Data Science

## TECHNICAL SKILLS

**Languages:** Python, Java, C/C++, Ruby, PHP/Hack, HTML, CSS, JavaScript, MATLAB, R, Julia, Stata
**Frameworks/Libraries:** Ruby on Rails, React, NodeJS, Bootstrap, Flask, TensorFlow, MySQL, SQLite, MongoDB
**Tools:** Git, Perforce, Mercurial, Docker, VS Code, PyCharm, IntelliJ, Eclipse

## EXPERIENCE

**Facebook** — **Summer 2021**
*Software Engineering Intern* — *Menlo Park, CA*
- Integrated highly-requested features into an internal tool for curating and uploading authoritative news content
- Met with cross-functional stakeholders and team members to design full-stack software feature specifications

**MathWorks** — **Summer 2020**
*Software Engineering Intern* — *Remote*
- Developed full-stack customer-facing web applications; pushed code to production for >1000 users per day
- Drafted thorough documentation of each project's test plan, requirements, use cases, and functional/architectural design
- Generated UI wireframes for new workflows, presented designs to users, and integrated feedback

**Universidad Politécnica de Madrid** — **Summer 2019**
*Data Science Research Assistant* — *Madrid, Spain*
- Explored topics in graph theory with a focus on dynamic phone networks from Senegal
- Constructed models around cleaned datasets and compared effectiveness of each model
- Evaluated correlational coefficients between properties including connectivity, transitivity, and reciprocity

## PROJECTS

**Interlock for Self-Driving Cars** | *Python, numpy, open3d, skimage, ffmpeg, CARLA* — **Sep 2020 — May 2021**
- Working on a team to implement and test certified control, an architecture to verify the safety of autonomous vehicles
- Implementing a path prediction algorithm to determine if the ego vehicle will collide with any objects in its path
- Testing the system in various driving scenarios using open-source autonomous driving simulation software

**G Suite Dashboard** | *JavaScript, Google AppsScript* — **Jan 2021**
- Consulted with Tutoring Plus of Cambridge, a non-profit advancing educational equity through free tutoring services
- Built an application to automate the sending of reminder emails; integrated the app into their existing G Suite dashboard
- Reduced the time needed by nonprofit volunteers by 95%, potentially increasing the volunteer feedback form response rate

**COVID-19 Data Analysis** | *Python, numpy, matplotlib* — **Apr 2020 — Aug 2020**
- Independent project; cleaned and explored the Johns Hopkins dataset of COVID-19 cases and deaths
- Built models to analyze the effects of state-imposed stay-at-home policy on the rate of spread of the virus

**Tempo** | *C++, Python, SQLite, Arduino* — **Mar 2020 — May 2020**
- Created a fitness device that matches a user's running speed and music preferences and plays a song to their device
- Implemented the back end to read step frequency, make HTTP requests to Spotify's REST API, and update user databases
- Developed a web UI that allows a user to login and perform CRUD operations on their stored runs or song playlists

**Artificial Synapses for Large-Scale Neuromorphic Arrays** | *MATLAB, Python, TensorFlow* — **Feb 2019 — May 2019**
- Developed machine learning tools to predict and extend machine lifetime

## LEADERSHIP

VP of New Member Education for Phi Sigma Rho Sorority — Feb 2021 — Present
Computer Science Tutor for HKN Honor Society — Sep 2020 — Present
Undergraduate Representative on MIT Committee on Curricula — Sep 2020 — May 2021
MIT IEEE Exec Board Officer — Sep 2019 — May 2021
MIT Women's Varsity Volleyball — Aug 2018 — Present