Annie Bryan

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EDUCATION

Massachusetts Institute of Technology (MIT) — **Cambridge, MA**
M.Eng.,Computer Science — *Expected May 2023*
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

TECHNICAL SKILLS

Languages: Python, Java, C++, Ruby, PHP/Hack, HTML, CSS, JavaScript, MATLAB, R, Julia, Stata

Frameworks/Libraries: Ruby on Rails, React, NodeJS, Bootstrap, Flask, TensorFlow, Requests, NumPy, SciPy, Pandas, Matplotlib, NetworkX, 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 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* — **Fall 2020 — Spring 2021**
- Implemented and tested certified control, an architecture to verify an autonomous vehicle's safety
- Formulated a path prediction algorithm to determine if the ego vehicle will collide with any objects in its path
- Tested 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 nonprofit advancing educational equity through free tutoring
- Built an application to automate sending reminder emails; integrated the app into an existing G-Suite dashboard
- Reduced the time needed from volunteers by 95% which increased the feedback form's response rate

COVID-19 Data Analysis | *Python, numpy, matplotlib* — **Spring — Summer 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, Jinja, SQLite, Arduino* — **Spring 2020**
- Created a fitness device that matches a user's running speed and plays a song to their authenticated device
- Implemented the back end to read the current step frequency and make HTTP requests to Spotify's REST API
- Developed a CRUD web UI with authentication that stores a user's run history, music preferences, and playlists

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

LEADERSHIP

MIT Women's Varsity Volleyball	Aug 2018 — Present
Gamma Class President for Phi Sigma Rho Sorority	Feb 2021 — Present
MIT IEEE Exec Board Officer	Sep 2019 — May 2021
Undergraduate Representative on MIT Committee on Curricula	Sep 2020 — May 2021