**EDUCATION**

**Boston University College of Engineering and College of Arts and Sciences Boston, MA**

B.S. in Computer Engineering, B.A. in Pure and Applied Mathematics (dual degree program)  **May 2021**

GPA: 3.92/4.00 (Dean’s list, all semesters)

**Boston University College of Engineering**   **Boston, MA**

M.S. in Computer Engineering **May 2024**

GPA: 3.79/4.00

**RELEVANT COURSEWORK**

Deep learning, advanced optimization theory and methods, online learning, learning from data, statistical learning theory, advanced data structures, stochastic processes, software engineering, reinforcement learning.

**RELEVANT EXPERIENCE**

**Danfoss Power Solutions; Innovation Accelerator,** Data Science Intern, Cambridge, MA **June 2021 - December 2021**

- Developed models for data-driven sales opportunity analytics including a binary classification model to predict likelihood of closing a sale, a Cox PH model to estimate time-to-close, and a partial dependency plot-based feature importance to recommend specific actions for sales managers

**IBM; TJ Watson Research Center,** Research Intern, Yorktown Heights, NY **Summer 2020**

- Conducted fault injection experiments on benchmark applications to gain familiarity with fault diagnosis in distributed systems and co-designed [**Tritium**](https://dl.acm.org/doi/pdf/10.1145/3493649.3493656?casa_token=jacWdIRHGPoAAAAA:VIcO784Y0YFdYl7XXD7rH76vUAIQMaRpkek_v6la9ur3PaKl4ko-iSqxVjGRmjA7L9naDM1DtZZgpg), a cross-layer analytics system for diagnosing faults in microservice applications

**Boston University; PEACLab,** Undergraduate Researcher, Boston, MA **Spring 2019 – Spring 2021**

- Helped develop [**Praxi**](https://dl.acm.org/doi/pdf/10.1145/3366627.3368111?casa_token=LHYPHUgGOf8AAAAA:JlAqouRSi0SMPRRWQmLaen_8ClSCuMgNYhiVPBpcH1nmWP_eQQTCv1cQ1K0WD3mjcNBKBTRsS-VDpQ), a tool designed to aid cloud administrators to monitor software present on their systems; Praxi employs a machine learning model to identify applications based on file system changes

- Converted research code to industry-ready modules, coding in Python on Linux virtual machines

- Designed hands-on cloud security software tutorial, extended Praxi’s capabilities to version detection

**OTHER EXPERIENCE**

**Boston University Department of Electrical and Computer Engineering**, Boston MA **August 2019 – May 2024**

Teaching Assistant for EC330 Applied Algorithms, EC414 Introduction to Machine Learning, EC440 Operating Systems

**PROJECTS**

- [**Spotimy**](https://github.com/sadiela/spotimy) website enabling users to filter their playlist according to audio features from the Spotify API

- [**ContextCheck**](https://github.com/sadiela/contextcheck)website with BERT-based NLP algorithm fine-tuned to detect bias in news articles

**LEADERSHIP, HONORS & AWARDS**

**Vice President,** Tau Beta Pi Engineering Honor Society, Eta Chapter  **May 2020 - May 2021**

**Music Director,** Chordially Yours **–** A Cappella group at Boston University  **January 2020 - May 2021**

BU Claire Boothe Luce Fellowship; Michael F. Ruane Award for Excellence in Senior Capstone Design; Senior Design Project Excellence Award; Honorable Mention: Computing Research Association's Outstanding Undergraduate Researcher Award;BU Richard D. Cohen Scholarship; BU’s Lutchen Engineering Summer Fellowship.

**SKILLS**

**Computer:** Python, Pytorch, Linux, Kubernetes, C, C++, Java, JavaScript, ReactJS, D3, Vega, R, ROS, GitHub, MATLAB, Flask

**PUBLICATIONS AND TALKS**

- **Allen, Sadie** and Anirudh Mani. “Collaborative Songwriting and Production with Symbolic Generative AI.” Lecture, Audio Developer Conference, November 14th, 2023, London, UK.

- **Allen, Sadie**, Mert Toslali, Srinivasan Parthasarathy, Fabio Oliveira, and Ayse K. Coskun. "Tritium: A Cross-layer Analytics System for Enhancing Microservice Rollouts in the Cloud." In Proceedings of the Seventh International Workshop on Container Technologies and Container Clouds, pp. 19-24. 2021.

- Byrne, Anthony, **Sadie L. Allen**, Shripad Nadgowda, and Ayse K. Coskun. "Praxi: cloud software discovery that learns from practice." In Proceedings of the 20th International Middleware Conference Demos and Posters, pp. 23-24. 2019.