SEBASTIAN COATES

Graduating May 2020

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WORK EXPERIENCE

Software Engineering Intern (Apple Watch)
Apple
📅 06/2019 - 08/2019   📍 Cupertino, CA

- Applied machine learning techniques to prototype new Apple Watch feature.
- Generalized project as framework to be integrated with other features.
- Presented work to VP and other members of the Watch organization.

Research Assistant in Network Science / ML
Tufts University
📅 09/2019 - Ongoing   📍 Medford, MA

- Applying community detection algorithms and other novel approaches to derive insights from high-dimensional, spatiotemporal networks (US Commuting networks over long time scales).
- Co-authoring articles for publication in peer-reviewed journals and conferences, as well as presenting research results in project meetings and workshops.

Software Engineering Intern
Vertex Pharmaceuticals
📅 06/2018 - 08/2018   📍 Boston, MA

- Developed a full-stack decentralized web application for clinical trial processes, using Ethereum, Solidity, Nodejs, and MySQL.
- Prepared 4-hour presentation for company CIO and other department representatives to explain Blockchain technology and its applications.

PROJECTS

Neural Mutual Information Model
📍 University of Oxford

- Developed a novel deep neural network architecture, providing enhanced interpretability and significantly faster training than traditional models.
- Received first-class honors in graduate-level course for the corresponding research paper. (PDF available upon request).

Music Information Retrieval
🔗 https://github.com/sebasscoates/graphmir

A graph-based approach to music information retrieval.

- Enabled 98% accuracy in binary genre classification and 92% accuracy in binary artist classification (same genre).
- Wrote formal paper analyzing the full project, included in GitHub.

EDUCATION

B.S. Computer Science, Math
Tufts University School of Engineering
📅 09/2016 - 05/2020

GPA
3.96 / 4.00

Visiting Student in Mathematics
University of Oxford
📅 10/2018 - 06/2019   📍 Oxford, England

RELEVANT COURSES

Machine Learning   **Deep Learning**

Algorithms & Data Structures   **Web**

Machine Structure & Assembly

Linear Algebra   **Information Theory**

Network Science   **Graph Algorithms**

Mathematical Modeling   **Statistics**

LANGUAGES

C

Python

Javascript

Objective C