TIFFANY DING

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EDUCATION

Brown University   *Providence, RI* • Expected graduation May 2021
- *Concentration:* Sc.B. in Applied Math   (Cumulative GPA*:* 4.0/4.0)
- *Relevant Coursework:* Machine Learning, Deep Learning, Statistical Inference, Linear Algebra, ODEs, PDEs, Operations Research – Probabilistic Models, Computational Prob. & Stats., Econometrics, Computational Biology, Computer Systems

RESEARCH & DATA SCIENCE EXPERIENCE

Undergraduate Researcher, Brown Center for Biomedical Informatics   *Providence, RI* • Sep 2018– Present
- Use Python to create predictive models for suicide risk and compare performance of various data oversampling techniques.
- Apply association rule learning to FDA data using Julia to discover drug-drug interactions that increase suicide risk.
- As primary author, presented paper at the *American Medical Informatics Association 2019 Annual Symposium* in Nov 2019.

Research Assistant, Brown University Dept. of Economics   *Providence, RI* • Sep 2019 – Dec 2019
- Summarized key findings of hundreds of scientific papers related to biology and public health.
- Performed preliminary steps of meta-analysis by calculating standardized mean difference using results of published studies.

Facebook University for Analytics Intern, Facebook Inc.   *Menlo Park, CA* • Jun 2019 – Aug 2019
- Conducted analyses on large datasets using SQL, Python, and Excel and created useful metrics and data visualizations.
- Effectively communicated findings through write-ups and presentations to team members and other interns.

Garcia Summer Research Scholar, Stony Brook University   *Stony Brook, NY* • Jun 2016 – Aug 2016
- Worked in Dr. Miriam Rafailovich's lab and performed experiments to determine the optimal polymer substrate for human dermal fibroblast migration and wrote a 16-page paper summarizing research findings.

PROGRAMMING & MODELING PROJECTS

Deep Learning Phishing Detection Model, Brown University   *Providence, RI* • Nov 2019 – Dec 2019
- Implemented a convolutional neural network using TensorFlow 2.0 to predict if a website is phishing or benign based off the characters in its URL and achieved a test accuracy of 96.2%.

Context Sensitive Hidden Markov Model, Brown University   *Providence, RI* • Dec 2019
- Created a Python implementation of the optimal alignment algorithm for context sensitive hidden Markov models, which augment the traditional hidden Markov model to allow for dependencies between distant symbols.

1st Place – Brown Mathematical Contest for Modeling, Brown University   *Providence, RI* • Nov 2019
- Formulated an optimal policy for bottled water distribution in the aftermath of the Flint water crisis by modeling the spread of trust in water quality using an infectious disease model (SIR model) and wrote an 18-page report summarizing model.

Hack@Brown, Brown University   *Providence, RI* • Jan 2018 & Jan 2019
- Used Webflow, Zapier, Google Sheets, and Python to create a website that helps parents find play mates for their children.
- Coded an iOS app using Xcode to help Brown students find nearby water fountains on campus.

Search Engine, Brown University   *Providence, RI* • Mar 2018
- Designed and implemented an algorithm in Scala that efficiently processes text files containing thousands of Wikipedia articles so that when users enter a query, they will receive the ten most relevant articles based off TF-IDF and PageRank.

LEADERSHIP & COMMUNITY ENGAGEMENT

DATA 1050, CSCI 0040, and CSCI 0170 Teaching Assistant, Brown University   *Providence, RI* • Aug 2018 – Dec 2019
- Designed an assignment to teach TF-IDF and PageRank and held office hours for students in *Data Engineering*, a Master's level data science course.
- Taught weekly sections, created homework assignments in Python, MATLAB, Racket, and OCaml, and held office hours for students in *Introduction to Scientific Computing* and *Computer Science: An Integrated Introduction.*

Head Photo Editor, Brown Daily Herald   *Providence, RI* • Sep 2017 – Present
- Manage team of over 12 staff photographers and hold weekly meetings to assign events to photographers to cover.

Member of   Women in Science & Engineering, Women in Computer Science, Association of Women in Mathematics

SKILLS & HONORS

Coding Languages   {Python | MATLAB | SQL | Julia | Java | Scala | OCaml} [intermediate] {C | HTML/CSS} [basic]
Additional Skills   TensorFlow 2.0, Tableau, Microsoft Excel, Adobe Photoshop
Honors   Rewriting the Code Fellow (2018 – Present), Grace Hopper Scholar (2019)