COLIN PHILLIPS

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Education

The University of Texas at Austin, Cockrell School of Engineering   *May 2022*
B.S. Electrical & Computer Engineering Honors, Mathematics   GPA: **3.83**
Languages: Python, C/C++, Java, JavaScript, HTML/CSS, C#, MATLAB, SQL
Frameworks: React, Gatsby.js, Express, Django, ASP.NET Core
Tools: MongoDB, Google Cloud Platform, Jupyter Notebooks, Hadoop, Apache Beam, Dataflow, AWS, Figma, Bootstrap
Interests: Algorithmic Fairness, Humanitarian Engineering, Water Polo, Sports Analytics

Work Experience

Northrop Grumman · *Product Manager/Software Engineer Intern*   **Summer 2020**
- Developed a full-stack web application on ASP.NET Core for asset management in the Integrated Data Operations (IDO) Group
- Utilized C# and SQL Server on backend with Entity Framework Core using a standard MVC architecture
- Fully designed UI/UX on Figma and created interactive client-side pages with the Blazor framework (C#, HTML/CSS)

Applied Research Laboratories · *Software Engineer Intern*   **Fall 2019**
- Worked within the Space and Geophysics Laboratory (SGL) on acquisition and validation of GPS data from satellites
- Developed and tested scripts in C and Python using static and dynamic testing within a Linux-based environment
- Spear-headed the transition from CUnit towards using the Robot Testing Framework for extraction software testing

Research

UT Human-A.I. Interactions Lab · *Undergraduate Researcher*   **Summer 2020-Present**
- Researching the use of deliberations in algorithmic governance and virtual proxies in college admissions & resource allocation
- Creating linear regression (lasso, ridge) and decision tree models for predicting success of graduate students in the iSchool
- Performing feature engineering/selection (correlation, mutual information) and statistical analysis (k-fold cross validation)

Oden Institute for Computational Engineering & Sciences · *Research Intern* **Summer 2019**
- Researched neural networks and their applications to fluid mechanics as an appointed Moncrief Fellow
- Applied novel architectures (ODE-nets) and procedures (normalizing flows) in characterizing turbulent pipe flow dynamics
- Created Python (PyTorch, Keras) and MATLAB scripts while using OpenFOAM to create simulation data for testing

Projects & Interests

Projects with Underserved Communities (PUC) · *Project Manager*   **Fall 2019-Present**
- Devised scope and implementation plan of an 806 sq. ft. community center in Andhra Pradesh, India for 59 local families
- Crowd-sourced over $22,400 in one month through various fundraising initiatives as the elected PM of this seven-person team
- Directed website development while facilitating communication with various international stakeholders

Texas Product Engineering · *Product Manager*   **Spring 2020-Present**
- Working alongside CTIO of Dell Med to create a mobile app aimed at improving surgical outcomes through prehabilitation
- Developed user stories and features list while collaborating with doctors to cater relevant content
- Assisting development with React Native on the front-end and designed database structure (implemented on MongoDB)

TAVtech Fellowship · *Data Science & ML Fellow*   **Winter 2019**
- Collaborated with American and Israeli academics and entrepreneurs in learning DS/ML technologies in a start-up ecosystem
- Headed team of six in creating a tool that utilizes the Twitter API for disease detection and prevention
- Used tweepy, Numpy, pandas, and nltk libraries to perform sentiment analysis and topic modeling for identifying hotspots

Humanitarian Engineering Student Advisory Committee · *Founder*   **Summer 2020-Present**
- Working alongside fellow appointed undergraduates to establish the Humanitarian Engineering Institute (HEI) at UT Austin
- Established long-term vision of the Institute to foster cross-disciplinary cooperation for international humanitarian efforts
- Identifying objectives and a timeline for creating the Institute and making it a premier center for humanitarianism

Strauss Center for International Security & Law · *A.I. Policy Research Fellow* **Summer 2020-Present**
- Appointed as a Brumley Next Generation Scholar to explore A.I. and technology regulation within the Strauss Center
- Exploring policy development in regulating the creation of Lethal Autonomous Weapons Systems (LAWS) for warfare