

Colin Phillips

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Education & Information

The University of Texas at Austin, May 2022
B.S. Electrical & Computer Engineering Honors, Mathematics
Minors: Statistics, Computer Science, Business
GPA: **3.84/4.00**

Languages: Python, Java, JavaScript, C/C++, C#, HTML/CSS, SQL, R
Frameworks: React, Express, Vue, Django, ASP.NET Core
Tools: MongoDB, Google Cloud Platform, Jupyter Notebooks, Hadoop, Apache Beam, Dataflow, AWS, Figma, Bootstrap

Work Experience

AI Global · Technical Product Manager Intern Sep. 2020 – Present
An American-Canadian think-tank dedicated to the promotion and development of ethical artificial intelligence systems

- Coordinated international development and promotion of open-source tools and resources for Responsible AI systems
- Overhauled front-end of “Where in the World is AI?” visualization tool using React JS, Material UI, & nivo to improve UI and onboarding
- Formulated marketing strategies that led to the tool being taught at two universities and increased audience by 2000+ users

Northrop Grumman · Software Engineer Intern Jun. 2020 – Aug. 2020
Global aerospace and defense technology company – attached to the Defense Systems Division

- Created a full-stack web application on ASP.NET Core for asset management in the Integrated Data Operations (IDO) Group
- Engineered C# and SQL Server backend with Entity Framework Core using a standard MVC architecture
- Completely prototyped UI/UX on Figma and created interactive client-side pages with the Blazor framework (C#, HTML/CSS)

Applied Research Laboratories · Software Engineer Intern Sep. 2019 – Feb. 2020
Department of Defense-affiliated research center specializing in national security through information science research

- Worked within the Space and Geophysics Laboratory (SGL) on acquisition and validation of GPS data from satellites
- Developed and tested 30+ 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-AI Interactions Lab · Undergraduate Researcher May 2020 – Present

- Exploring the use of deliberations and collaboration in creating equitable machine learning models for graduate admissions
- Designed linear (lasso, ridge) and logistic regression models for predicting success and acceptance of 2000+ students
- Performed extensive feature engineering/selection (correlation, mutual information) and statistical analysis for model validation

Strauss Center for International Security & Law · AI Policy Research Scholar May 2020 – Present

- Appointed as a Brumley Next Generation Scholar to research AI and technology legislation from national security perspective
- Exploring development of regulating the creation and usage of lethal autonomous weapons systems (LAWS) in combat
- Created proposal for an international regulatory approach and slated to present to lawmakers in Washington, D.C. in December

Oden Institute for Computational Engineering & Sciences · Research Intern Jun. 2019 – Aug. 2019

- Researched neural networks and their applications in 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

Projects with Underserved Communities (India) · Project Manager Aug. 2019 – Present

- Devised scope and implementation plan of an 806 sq. ft. community center in Andhra Pradesh, India for 60+ local families
- Crowd-sourced over \$22,400 through various fundraising initiatives while facilitating coordination with international stakeholders
- Designed and built project website from scratch using Gridsome (Vue.js) while integrating Google Analytics to track conversions

Responsible AI Portal · Product Manager, Front-end Engineer Sep. 2020 – Present

- Coordinating creation of a central repository of reports, standards, models, and more for informed creation of responsible AI systems
- Building front-end while defining product requirements using React, Ant Design, and an Express back-end with MongoDB
- Accumulated 300+ relevant resources and automated ongoing search process through a Python and BeautifulSoup web-scraper

Path Mobile Application · Product Manager Feb. 2020 – Present

- Collaborated with CTIO of Dell Medical School to create mobile app to improve surgical outcomes through rehabilitation
- Formulated product specifications and user stories while collaborating with stakeholders to cater relevant content
- Promoted Agile environment while helping engineer front-end with React Native and serverless architecture on AWS Lambda

Motum Analytics (Israel) · Data Science Lead Oct. 2019 – Feb. 2020

- Headed team of six in creating a web application 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
- Presented to Israeli entrepreneurs and awarded fourth place at the annual TAVtech Hackathon in Tel Aviv