

**Tony Shen**

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**Availability:****Job Type:** Permanent, Term, Presidential Management Fellows, Recent Graduates, Telework**Work Schedule:** Full-time, Part-time

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**Desired Locations:**

ALL, Georgia, United States; ALL, Maryland, United States; ALL, New Jersey, United States; ALL, New York, United States; ALL, Virginia, United States; Washington, District of Columbia, United States; Chicago, Illinois, United States

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**Work Experience:****Student Management Analyst****U.S., Department of Housing and Urban Development**

451 7th St SW

Washington DC, DC

**9/2023 - Present****Hours per week:** 40**Duties, Accomplishments and Related Skills:**

- \* Collaborated with supervisors and senior staff to resolve technical work problems not covered by established policies or procedures.
  - \* Assisted in conducting research and finding data from multiple sources to support FHEO and Compliance Investigative processes.
  - \* Contributed to the creation and implementation of improvements to work processes and procedures, enhancing FHEO's efficiency.
  - \* Developed FHEO Bayesian Improved Surname Geocode algorithm in VBA, to impute race-and-ethnicity percentage as a proxy. Automated computation process to increase accessibility and efficiency.
  - \* Developed Graphical User Interface internal tool, through Python, to democratize conversion of historic and present data to OMB race-and-ethnicity guidelines by SPD15 year, allowing Field and HQ users to easily convert agency statistics.
  - \* Authored position memoranda to recommend new variables and data sources to inform and update the Affirmatively Furthering Fair Housing Program's Education Quality Index.
  - \* Analyze Census data and create descriptive statistics, from the American Housing Survey (AHS), to inform pursuant changes in regulations relating to Section 504's current accessibility threshold requirements.
  - \* Research current state Low Income Housing Tax Credit programs' threshold requirements regarding accessible units allocated for ambulatory and hearing disabilities to inform data analysis and visualizations.
  - \* Coordinate ETL processes to onboard 7 years of a Public Housing Authority's data to ensure organizational compliance with Title VI of the Civil Rights Act (1964) and Section 504(c) of the Rehabilitation Act (1973).
  - \* Advise and develop data management infrastructure for Field Office review and reporting needs.
  - \* Provide statistical validation and technical assistance to inform presentations and reports recommending possible regulatory change and amendment.
  - \* Served as liaison with other HUD components and data point of contact to maintain office hours programming.
  - \* Served as a student trainee, undergoing training in analytical methods essential for developing objectively based information to support administrative and programmatic planning, development, evaluation, and managerial decision-making.
  - \* Engaged in on-the-job training assignments to gain a practical understanding of HUD and FHEO structures, programs, policies, and objectives, while applying principles, procedures, and work techniques.
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**Government Relations Intern**

**Electronic Transactions Association**

1300 Connecticut Avenue, Suite 475

Washington DC, DC

**6/2023 - 9/2023****Hours per week:** 40**Duties, Accomplishments and Related Skills:**

- \* Analyzed event attendance trends using Excel, to inform operations optimization for future organization events
  - \* Maintained member database, in Impexium (CRM), to ensure accurate contact information and streamlined communication channels
  - \* Researched rulemaking report on cryptoassets and CBDCs, providing insights and analysis to association members
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**Data Curation Fellow****University of Maryland, College of Behavioral & Social Sciences**

7343 Preinket Dr.

College Park, MD

**1/2023 - 5/2023****Hours per week:** 10**Duties, Accomplishments and Related Skills:**

- \* Clean weekly social science datasets (over 100MB) using Python for distribution on College's data archive
  - \* Use prepared datasets to propose possible research questions and uses for classroom instruction related to subjects of applied statistics and quantitative social science research
  - \* Create diversity, equity, and inclusion framework for future fellows to guide cleaning and profiling practices
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**Undergraduate Teaching Assistant****University of Maryland, Department of Government and Politics**

7343 Preinkert Drive

College Park, MD

**8/2021 - 12/2022****Hours per week:** 30**Duties, Accomplishments and Related Skills:**

- \* Facilitated weekly discussion sections on R for 20 students, providing academic support and recitation \*
  - Proctored student examinations and graded weekly assignments and summative assessments
  - \* Designed and conducted a 2,000-person survey using Qualtrics in collaboration with students regarding contemporary political topics and the 2022 Midterm Elections
  - \* Built OLS and logistic regression models in R to predict voter behavior in 2022 Midterm Election
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**Correspondence Intern****The White House, Office of the Vice President**

1650 17th St NW

Washington DC, DC

**6/2022 - 8/2022****Hours per week:** 40**Duties, Accomplishments and Related Skills:**

- \* Organized and coded thousands of physical and digital mail items, streamlining processing procedures
  - \* Performed data entry and quality control for outgoing mail to ensure accurate correspondence
  - \* Facilitated connections between constituents and federal agencies to provide assistance
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**Legislative Intern****Maryland General Assembly, House of Delegates**

6 Bladen St  
Annapolis, MD

**1/2022 - 4/2022**

**Hours per week:** 15

**Duties, Accomplishments and Related Skills:**

- \* Researched and authored memorandums on policy reactions to negative externalities of smoking tobacco products in the Maryland State Legislature
  - \* Aggregated Census data using Excel on precinct and county racial demographics
  - \* Used Microsoft Power Query to clean 1,000 unit datasets for quantitative analysis and data visualization
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**Education:**

**University of Maryland** College Park, MD United States

Bachelor's degree 5 / 2023

**GPA:** 3.87 of a maximum 4.00

**Credits Earned:** 121 Semester Hours

**Major:** Government and Politics

**Relevant Coursework, Licenses and Certifications:**

\*Taught "Scopes and Methods" course for political science research in R programming language \*Relevant Coursework: Microeconomics, Logic, Scopes & Methods, Databases, Machine Learning, Applied Quantitative Methods, Advanced Empirical Research, Data Collection & Surveys, Statistics

**Georgia Institute of Technology** Atlanta, GA United States

Master's degree

**Credits Earned:** Semester Hours

**Major:** Analytics

**Relevant Coursework, Licenses and Certifications:**

Coursework: Introduction to Analytics Modeling

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**Job Related Training:**

Career Essentials in Data Analysis by Microsoft and LinkedIn

Jan 30, 2023

Introduction to Career Skills in Data Analytics by LinkedIn

Jan 14, 2023

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**Language Skills:**

Language	Spoken	Written	Read
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Chinese	Advanced	Intermediate	Advanced
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**Affiliations:**

Terps for Service Members - Public Relations Coordinator

American Statistical Association - Member

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**Additional Information:**

US Citizen

Registered for Selective Service

**Skills:**

Technical: R · Python · SQL · Qualtrics · Tableau · Power BI · Excel · Photoshop · Illustrator · Microsoft Suite · Google Workspace · Intranet Quorum (CRM software) · LaTeX · Git/Github · VBA · Macros

Modeling: Linear/Logistic Regression · Decision Trees · Random Forest · XGBoost · Time-Series Analysis · Natural Language Processing

Undergraduate Art History Symposium:

- \* One of five speakers at the annual Undergraduate Art History Symposium, hosted by the University of Maryland's Department of Art History & Archaeology
- \* Presented an art history research paper titled: "Avant-Garde Under Radicalism: Nazism and Art"

#### Competitions:

##### DC DataFest, Summit LLC

- \* Developed a time-series forecasting model to predict future demand for legal questions by category on the American Bar Association's online pro bono platform
- \* Implemented a natural language processing model on 800MB of data to classify client-attorney conversations and identify patterns in the tone of queries
- \* Designed and developed a Tableau dashboard that won the Best Visualization award to effectively communicate recommendations to the ABA
- \* Awarded Best Insight for delivering actionable recommendations based on analysis and visualization

##### PLACEHack 2022

- \* Part of a 5-person team that devised a creative solution for a location redesign of the University of Maryland's Art School Amphitheater.
- \* Awarded \$1000 prize for holistic redesign and special achievement in "Equity and Accessibility", through identifying mobility accessibility improvements to location.

#### Projects:

##### Melbourne Housing Price Prediction Model

- \* Preprocessed data by imputing missing values and applying one-hot encoding to categorical values
- \* Built XGBoost Model to predict Melbourne Housing Prices from housing dataset with 81 attributes
- \* Improved upon random forest model by decreasing Mean Absolute Error score by 24.51%

##### Rent Price Trends Across the United States

- \* Used Python to clean national rental data from ApartmentList.com and calculated Month-over-month and Year-over-year percent change time-series analysis of median rent prices
  - \* Built Tableau dashboard to visualize national rent trends by level and percent change, as well as mapping MoM and YoY median rent change on state and metro levels
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