

# Valentine Wilson

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**Skills:** Python (NumPy, OpenCV, TensorFlow, scikit-learn, Matplotlib, BeautifulSoup, Gephi), R (Shiny, ggplot), SSPS, JavaScript (jQuery, D3, Waypoints, ScrollStory, Chart.js), HTML/CSS, SQL, Java, Tableau

**Coursework:** Data Visualization, User-Interface Design, Machine Learning, Research Methods and Analysis, Linear Algebra, Probability and Statistics

## WORK EXPERIENCE

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### The Hudson Institute

May 2019 – August 2019

*Technology and Policy Research Intern*

*Washington, DC*

- Assisted scholars in research and analysis of 5G networks, the United States-China trade war, and quantum encryption.
- Staffed events on Capitol Hill: checked-in guests, distributed programs, and helped facilitate Q&A sessions.

### Draper Laboratory

May 2018 – August 2018

*Machine Intelligence Intern*

*Cambridge, MA*

- Created targeted and non-targeted adversarial attacks on deep neural networks.
- Visualized social graphs of company employees using Gephi to find clusters of people with similar skill sets.
- Cleaned financial data to be used in market prediction software.

### Institut Pasteur

June 2017 – August 2017

*Data Visualization Intern*

*Paris, France*

- Built a R-Shiny web app that visualizes gene expression data.
- Incorporated dimensionality reduction, scree plots, and other statistical methods into the web app.

## PROJECTS

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### Typography Phylogenetic Tree

May 2020

- Used a combination of BeautifulSoup and manual scraping to create a spreadsheet of aesthetic movements and relationships between typefaces from the early Renaissance through the Information Age.
- Used JavaScript along with D3 and Waypoints to assemble the data into an interactive tree visualization.

### The Love Machine

December 2018 – March 2020

- Lead a team of 24 engineers to create a system which matched 1500 students at Georgia Tech with potential soulmates using genetic algorithms.
- Conducted follow up interviews with couples matched, analyzed data collected by the survey, and published a related article on “Towards Data Science” summarizing research and results using Tableau.
- Created a website using D3 and ScrollStory to visualize data from the results.
- Coordinated a Valentine's Day dinner for 200 participants to meet their matches.

### Systems Neural Engineering Lab

August 2017 – May 2019

- Completed a thesis on the use of computer vision to estimate the pose of rats.
- Built a system which allows simultaneous recording from two high speed cameras using a Raspberry Pi.

## EDUCATION

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### Georgia Institute of Technology

August 2016 - May 2020

BS Computer Science, Concentration: Artificial Intelligence and Human-Computer Interaction, GPA: 3.56/4

- Artificial Intelligence Club:
  - Communications Officer (Spring 2016 – Spring 2018)
  - President (Spring 2018 - Spring 2019)
- WREK Radio: Operator (Fall 2018 – Fall 2019)

### University of New South Wales

August 2019 – January 2020

- Blitz Student Newspaper: General Assignment Reporter (September 2019 – January 2020)