Michael Young

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Github: https://github.com/mkcyoung | Portfolio: mkcyoung.github.io

EDUCATION

University of Utah – Salt Lake City, UT **2019 - 2021**
MS in Computing, *Data Management and Analysis Track*

- 3.92 GPA
- Relevant Coursework: Advanced Algorithms, Data Mining, Data Visualization, Machine Learning, Deep Learning, Clustering, Structured Prediction, Information Extraction

University of Utah – Salt Lake City, UT **2011 - 2017**
BS in Biomedical Engineering, *Minor in English Literature, Minor in Chemistry*

- 3.96 GPA –*Magna Cum Laude*
- Honors Thesis: The Contributions of Elastin to Ligament Viscoelasticity

SELECTED PROJECTS

Park City Power and Transportation Network Visualization

- Collaborated with the Dept. of Electrical Engineering to create a web-based, interactive visualization to explore the multi-network relationship between the power distribution and electrical bus transit systems of Park City, Utah.
- Tools: Javascript (+d3.js), HTML, CSS
- View live demo: https://usmart.ece.utah.edu/power-transit-vis/
- View publication on arXiv: https://arxiv.org/abs/2011.10917

Deep Green Space

- Trained a CNN on the Cityscapes dataset & hand-labeled Google Street View images to quantify the amount of urban "green space" in Salt Lake City, UT. Achieved a pixel-wise accuracy of 96.1% & an mIoU of 74.8% on our test set.
- Tools: Python, PyTorch
- View on Github: https://github.com/mkcyoung/deep-green-space

Old Bailey Decisions

- Classified trial outcomes (guilty/not guilty) based on text transcripts from trials + additional metadata about the persons involved. Used ML algorithms built from scratch. My best model achieved a test accuracy of 85.18%, placing me at #2 out of 103 in the final standings.
- Tools: Python, PyTorch
- View on Github: https://github.com/mkcyoung/old-bailey-decisions

EXPERIENCE

Research Assistant **January 2020 - February 2021**
SCI (Scientific Computing and Imaging Institute) – Salt Lake City, UT

- Advisor: Bei Wang, University of Utah
- Developed a web-based, interactive visualization using d3.js to explore the multi-network relationship between the power distribution and electrical bus transit system of Park City, Utah. [publication]
- Created a tool with d3.js which visualizates the uncertainty of various graph reduction algorithms. [in process]
- Contributed to a survey covering visualization efforts in astronomy over the previous decade. [publication]

Medical Technologist **January 2018 - Present**

ARUP (Associated Regional and University Pathologists) – Salt Lake City, UT

- Developing a software application to aid in the scheduling of tasks throughout the week. Tools: Node, Typescript and React. Backend is NoSQL w/ MongoDB.
- Perform various diagnostic assays centered around PCR to identify oncogenic mutations in patients.
- Analyze and verify patient results using several different software/hardware platforms.

SKILLS

Programming:

- Proficient: **Python** (numpy, pandas, PyTorch, scikit-learn, django, flask), **Javascript/Typescript** (Node.js, d3.js, React, Redux, GraphQL, NoSQL, jest, cypress), **CSS**, **HTML**
- Basic: SQL, MATLAB, LabView, C

Other:

- Technical writing, Microsoft Office