Daniel Allen

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Programming Skills

- **Languages**: Python, Tensorflow, Keras, Numpy, Pandas, Bash, SQL, MATLAB, C++, HTML5
- **Technologies**: Linux, Git, Docker, Tableau, GCP
- **Toolkit**: Terminal, Vim, Regex, LaTeX, Microsoft Office

Education

- **Western University** — London, ON
  Masters of Engineering Science in Electrical & Computer Engineering — *Sept. 2017 – Sept. 2019*
- **Western University** — London, ON
  Bachelor of Engineering Science in Computer Engineering — *Sept. 2013 – April. 2017*
  - **University of Western Ontario Gold Medal in Computer Engineering**: Awarded for highest grade in program.

Experience

- **Western University** — London, ON
  Graduate Teaching Assistant — *2017 - 2019*
  - **Teaching Assistant - Introduction to Electrical Engineering**: Course teaching engineering undergraduate students electrical circuits and electrical engineering principals. Involved running labs and grading.
  - **Teaching Assistant - Programming Fundamentals for Engineers**: Course for teaching programming to undergraduate engineering students.
- **McMaster University** — Hamilton, ON
  NSERC USRA Research Student — *May 2014 - Aug 2014*
  - **Automated gait analysis**: Used digital signal processing techniques on inertial measurement units to analyze and categorize patient by their walking gait.

Projects

- **LifeStyle AI**: Food and fitness app with multivariate time series body weight prediction with macro nutrient and food recommendation.
- **Automated Segmentation of Temporal Bone Structures**: Masters thesis project for the automatic segmentation of critical anatomy within the ear for the purpose of creating 3D models for surgical simulation. Used a variety of computer vision techniques such as multi-atlas based methods and convolutional neural networks.
- **U-net for Segmentation of Lungs from CT Images**: A U-net convolutional neural network for segmenting lungs from the luna-16 dataset.

Publications

- **Automated Segmentation of the Sigmoid Sinus using a Multi-Atlas Approach**: D. G. Allen et. al, 2019
- **Multi-atlas segmentation of the facial nerve from clinical CT for virtual reality simulators**: Brad Gare, D. G. Allen, et. al, 2019
- **Morphological analysis of sigmoid sinus anatomy: clinical applications to neurotological surgery**: Kylen Van Osch, D. G. Allen, et. al, 2019

Relevant Course Work

- Machine Learning, Deeplearning.ai Coursera, SQL for Data Scientists, Data Analytics, Discrete math, Linear algebra, Calculus, Digital Logic, Image Processing