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# Anthony G.X. Chen

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https://im-ant.github.io/

## Experience

**Software Engineering Intern** **Microsoft Corporation** **Summer 2018**

- Leveraged distributed parallel computing in building a metrics pipeline for data visualization and analytics
- Team: Azure Event Grid, an innovative solution for event-based applications and serverless workflows

**Computational Researcher** **MUHC** **May 2016 – June 2018**

- Developed data extraction algorithms for genomics data, reduced analysis time by over 90%; have since been adopted to other projects and are currently being implemented as a clinical diagnostic tool

**Computational Researcher** **CoBrA Lab, McGill** **Summer 2017**

- Applied unsupervised methods to MRI data in building data-driven tool for brain image segmentation
- Developed data pre-processing pipelines to remove human interventions, adopted by other researchers

**Teaching Assistant** **McGill University** **Fall 2016 - Fall 2017**

- Course: Logic and Discrete Mathematics, Physics - Mechanics and Electromagnetism

## Projects

**ProductivityLog** **2018**

- Employ NLP and Bayesian machine learning to classify self-reported activities into productivity categories
- Data visualization and classical statistical methods are used to find trends to inform future self-improvement

**Cluster_Stability_Analyzer** **2017**

- Reduced space complexity from $\mathbf{O}(n^2)$ to $\mathbf{O}(n)$ in Ben-Hur's 2002 (Pacific Symposium on Biocomputing) method for stability analysis that counts the number of common edges between graphs

**Monkey_Mind_Reading** **2017**

- Used deep neural net to analyze biological neural activity, predicted eye movement with >90% accuracy

**ClinVar_Pathogenicity** **2016**

- A highly scalable tool for automated, large scale identification of disease status using genetic information

## Publications

- Trakadis, Y.J., Sardaar, S., **Chen, A.** *et al.* Machine learning in schizophrenia genomics, a case-control study using 5,090 exomes. *American Journal of Medical Genetics Part B: Neuropsychiatric Genetics* (2018)
- **Chen, A.** *et al.* (2017, September). *Learning the whole from understanding its parts: In Vivo, Multimodal Parcellation of the Thalamus.* Presented at the Integrated Program in Neuroscience Retreat, McGill University

## Education

**Montreal, QC** **McGill University** **Sept 2015 - April 2019**

- *B.Sc. Neuroscience and Computer Science.* (GPA: 3.97/4.0)
- Selected coursework: Algorithms & Data Structures, Software Systems, Programming Languages, Probability, Discrete Mathematics, Machine Learning, Calculus, Neuroinformatics

## Awards

**Winner** **ImplementAI Hackerthon** **October 2017**

- Selected from over 100 hackers, for predictive model on stock fluctuations using Reddit trends

**1st Place, Research Expo** **Douglas Mental Hospital** **August 2017**

- For work done on unsupervised learning application to medical imaging analysis

**NSERC Research Award** **Faculty of Medicine, McGill** **April 2017**

- Selected amongst a pool of competitive applicants for a $4500 summer research scholarship

## Technologies

- Python, Anaconda, Shell Scripts, UNIX-based systems, C#, Java, MATLAB, SQL, nltk, Keras, C, R