

Anton Sugolov

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EDUCATION

University of Toronto

Sep. 2020 – Present

H.B.Sc. Mathematics

3.90

Second year student pursuing a Mathematics Specialist and Statistics Minor.

University of Toronto Schools

Sep. 2016 – June 2020

Ontario Secondary School Diploma

EXPERIENCE

Research Assistant – Mathematics

June 2021 – Sep. 2021

Dr. Pawel Pralat and Dr. Constantinos Georgiou, Ryerson University/Fields Institute

Worked towards an optimal algorithm for the discovery/evacuation of two searchers and two exits on the unit disk.

Explored various search algorithms in order to determine a time upper bound for the problem.

Calculated algorithm upper bounds in Sage and Mathematica.

Research Assistant – Statistical Genetics

June 2020 – June 2021

Dr. Lei Sun, University of Toronto and Dr. Andrew Paterson, SickKids Hospital

Conducted several practice Genome Wide Association Studies using data from the 1000 Human Genomes Project.

Used PLINK v1.90 to perform quality control, association, and principal component analysis of data for GWAS.

Performed exploratory statistical analyses on the NHGRI-EBI catalogue of Genome-Wide Association Studies.

Prepared and conducted a GWAS workshop for UTS students.

Student Visitor

July 2019

Campbrain

Visited North America's leading camp management software company.

Gained an understanding of the professional software development and testing process.

PROJECTS

GWAS Workshop

June 2021

Dr. Lei Sun, University of Toronto and Dr. Andrew Paterson, SickKids Hospital

Compiled a GWAS manual for using PLINK v1.90, R, and LocusZoom and documenting key statistical concepts.

Lead R and PLINK tutorial sessions to conduct a GWAS of LRAP gene expression from 1KG project individuals.

Discussed big data visualization, population stratification, and reproducibility with participants.

Received funding from the Faculty of Arts and Science to conduct a similar workshop for Undergraduate Statistics students in February 2022.

Network Science Literature Review

December 2020

VIC172: Physical Sciences Today

Produced an overview of the history of the study of networks, focusing on key articles and contributors.

Facial Emotion AI Image Matcher

Independent

Created a website that matches facial emotion in uploaded images to the closest in a set of reaction images.

Back-end is in Python using the FER library.

Programming

Independent

Miscellaneous projects; recreating Tetris with Java and solving contest problems.

TECHNICAL SKILLS

Programming Languages: Python, R, Java, Shell

Markup tools: L^AT_EX, HTML

Operating Systems: Microsoft Windows, Manjaro/Arch Linux

Other: Microsoft Office, GitHub

AWARDS

Faculty of Arts and Science, Pedagogical Innovation and Experimentation

May 2021

University of Toronto

Grant to conduct a GWAS workshop for Undergraduate Statistics students in February 2022.

University of Toronto Scholars Program

September 2020

University of Toronto

Ontario Scholar of Merit

June 2020

Ontario Ministry of Education

AP National Scholar

June 2020

Collegeboard