Anton Sugolov

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EDUCATION

University of Toronto
Sep. 2020 – Present

H.B.Sc. Mathematics   *3.90*

- Second year student pursuing Mathematics Specialist and Statistics Minor.
- Coursework includes Analysis I, II, Algebra I, II, Introduction to Topology, Combinatorics, Probability and Statistics I, Software Design.

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

- Contributed to the exploration of a family of pilgrimage problems on the unit disk.
- Worked towards an optimal algorithm for the discovery/evacuation of two exits by two searchers.
- Explored various algorithms to determine time bounds for evacuation using 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 presented 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

Course Scheduling Application
December 2021

CSC207: Software Design I

- Created a Java-based course scheduler using the UofT API that allows students to generate schedules with specific parameters (exclude conflicts, enforce times with no classes, minimum RateMyProf ratings).
- Implemented SOLID Design principles, Design Patterns, and used Clean Architecture to organize control flow.
- Used a GitHub workflow with other students to complete the project.

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.

Facial Emotion 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.

Technical Skills

Languages: Python, R, Java, Sage
Markup tools: LaTeX, HTML
Operating Systems: Microsoft Windows, Manjaro/Arch Linux
Other: Microsoft Office, GitHub, Shell

Honours

Regents In-Course Scholarship September 2021

Victoria College

- · Awarded on the basis of academic performance.

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