

# CURRICULUM VITAE

## BENJAMIN DAVID FEDORUK

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### RESEARCH INTERESTS

I am passionate about mathematics and its education. Mathematically, I am interested in group theory and algebraic number theory. Educationally, I am interested in inquiry-based learning (IBL) and the use of LLMs in education. Through my experience with undergraduate research, I've observed how novel mathematical insights often emerge when students engage with mathematics in innovative ways, reinforcing my belief in the deep connection between mathematical discovery and effective andragogy.

### EDUCATION

2024 – 2025	<b>Master of Education</b> Ontario Tech University
2020 – 2024	<b>Bachelor of Science (Honours)</b> , Applied and Industrial Mathematics With Highest Distinction Ontario Tech University
2016 – 2020	<b>International Baccalaureate Certificate Program</b> Superior Collegiate and Vocational Institute

### PUBLICATIONS

- (3) **Fedoruk, B. D.** (2025). Cross-evaluation of large language model assessment behaviours in educational tasks by cognitive level. *Journal of Educational Informatics*, 6(1), 2–23. <https://doi.org/10.51357/jei.v6i1.314>
- (2) Diyab, A., Frost, R. M., **Fedoruk, B. D.**, Diyab, A. (2025). Engineered prompts in ChatGPT for educational assessment in software engineering and computer science. *MDPI Education Sciences*, 15(2), Article 156. <https://doi.org/10.3390/educsci15020156>
- (1) **Fedoruk, B. D.**, Nelson, H. S. R., Frost, R. M., & Fucile Ladouceur, K. A. (2021). The Plebeian Algorithm: A democratic approach to censorship and moderation. *JMIR Formative Research*, 5(12), Article e32427. <https://doi.org/10.2196/32427>

### CONFERENCES

- (1) **Fedoruk, B. D.**, Showler, A. M., Shah, N. S., Tsai, P. J. (2022, August 8-9). Darwinian MAVs: The biomimicry of a hybridization of small birds' flight patterns in the UAV context [Poster presentation]. 30th Annual Conference of the Computational Fluid Dynamics Society of Canada, Toronto, ON, Canada. <https://doi.org/10.54985/peerref.2411p6084991>

**BLOG POSTS**

- (1) **Fedoruk BD.** Natural philosophy in the ancient and early modern worlds. SciComm Blog, STEM Fellowship. 2022 Mar 25.

**TEACHING****Student Learning Support**

02/2025 – present

**Subject Specialist - Mathematics**

Student Learning Support - Teaching and Learning Centre

*Courses Taught*

MATH 1000U	Introductory Calculus	MATH 1010U	Calculus I
MATH 1020U	Calculus II	MATH 1850U	Linear Algebra
MATH 1880U	Math. Modeling for Health	MATH 2050U	Linear Algebra
MATH 2055U	Adv. Linear Algebra	MATH 2060U	Differential Equations
MATH 2072U	Computational Science	MATH 2080U	Discrete Mathematics
MATH 2860U	Differential Equations	PSYC 2910U	Data Analysis
PSYC 3910U	Adv. Data Analysis	SSCI 2910U	Data Analysis
SSCI 3910U	Adv. Data Analysis	STAT 2010U	Statistics and Prob.
STAT 2020U	Statistics and Prob.	STAT 2800U	Statistics and Prob.
CSCI 2072U	Computational Science	CSCI 2110U	Discrete Mathematics
HLSC 2700U	Math. Reasoning in Health	HLSC 3800U	Introductory Statistics
INFR 1010U	Discrete Mathematics	INFR 1016U	Introductory Calculus

**Teaching Assistantships**

MATH 3070U	Algebraic Structures, Ontario Tech University (Winter 2025)
MATH 2055U	Advanced Linear Algebra, Ontario Tech University (Winter 2025)
MATH 2050U	Linear Algebra, Ontario Tech University (Winter 2025)
IMCS 3010U	Integrated Application Project, Ontario Tech University (Fall 2024)
MATH 3020U	Real Analysis, Ontario Tech University (Fall 2024)
CSCI 2110U	Discrete Mathematics, Ontario Tech University (Fall 2024)
MATH 1850U	Linear Algebra for Engineers, Ontario Tech University (Spring 2024)
MATH 2055U	Advanced Linear Algebra, Ontario Tech University (Winter 2024)
MATH 2050U	Linear Algebra, Ontario Tech University (Winter 2024)
MATH 1850U	Linear Algebra for Engineers, Ontario Tech University (Fall 2023)
MATH 1010U	Calculus I, Ontario Tech University (Winter 2023)
MATH 1000U	Introductory Calculus, Ontario Tech University (Fall 2022)

**SERVICE ACTIVITIES**

01/2022 – 08/2022

**Copy Editor**

STEM Fellowship Journal

01/2023 – 01/2025

**Reviewer**

Journal for Medical Internet Research (JMIR)

## OTHER POSITIONS

05/2023 – 10/2023	<b>Content Development Assistant</b> Ontario Tech University
02/2022 – 08/2022	<b>Event Coordinator</b> STEM Fellowship (Data Science Committee)
08/2021 – 02/2022	<b>Program Management Team Lead</b> STEM Fellowship (Data Science Committee)
08/2022 – 09/2022	<b>Scholarly Viewpoint Challenge Mentor</b> STEM Fellowship (Scientific Communication Committee)
01/2021 – 08/2022	<b>Co-Founder and President</b> Northern Shores Innovation Institute
10/2021 – 01/2022	<b>Data Analyst</b> AutoGuardian by SmartCone
01/2017 – 06/2019	<b>Vice President</b> Regional Multicultural Youth Council

## WORKSHOPS HOSTED

06/2023	Combinatorial logic and the sage bird <b>(50 attendees)</b>
04/2023	APLify Your Data Science: Unlocking the Power of APL for Efficient and Expressive Analysis and Visualization <b>(30 attendees)</b>
11/2021	Fighting for the Truth: Using the Plebeian Algorithm to Combat Social Media Misinformation <b>(30 attendees)</b>
10/2021	A Democratic World Wide Web: An Introduction and Implementation of the Plebeian Algorithm to Freely Combat Misinformation <b>(1600 attendees)</b>

## CERTIFICATIONS

2023	Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans (TCPS 2: CORE 2022)
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## HONOURS AND AWARDS

2025	Ontario Tech University President's Award of Excellence (Graduate)
2024	Graduated with Highest Distinction, Ontario Tech University
2023	Johnson Inc. Scholarship
2022	NSERC Undergraduate Student Research Award
2022	M2C2 ICUBE Third Place Award
2022	Accessible Mobility: Towards a Zero-Barrier Mobility Challenge Third Place
2021	Brilliant Catalyst Challenge for Rural Canada Winner
2021	JMIR Infodemic Innovation Award
2021	#Challenge4ClimateAction: Datathon Stream Second Place
2020	Ontario Scholar
2020	Kiwanis Club of Westfort Scholarship

*This curriculum vitae is true and accurate as of 24 April 2025.*