Hamza Dugmag *U of T Engineering Science — Year 2*

⚲ Oakville, ON ✎ hamzadugmag.com ✉ hdugmag@gmail.com in hamza-dugmag ⓖ hamza-dugmag

Professional Experience

Student Leader — Academic Review Mentor,
Faculty of Applied Science and Engineering
Aug 2021 – present
- Led weekly sessions for Year 1 Engineering Science students.
- Created promotional material for the mentorship program.

University of Toronto Aerospace Team

Rocketry Avionics Lead
Jun 2021 – present
- Led a team of 9 students to deploy ground and flight systems for *UTAT*'s high-altitude rockets.
- Developed data acquisition methods to calibrate load cells and pressure transducers with 95% accuracy.
- Designed surge-protected relay circuits for DC motors, increasing current rating by 54%.
- Represented the Rocketry team in an interview for *UTAT*'s recruitment and sponsorships video.

Rocketry Avionics Member
Jan 2021 – Jun 2021
- Developed a finite-state machine and abort system using Arduino and C++ to control the liquid rocket's flight system.

Natural Language Processing Researcher,
University of Toronto — Forcolab Group
May 2021 – present
- Replicated BERT models for detecting type-III code clones using PyTorch.
- Optimized parameters for hierarchical density-based clustering of *Stack Overflow* community posts, increasing precision by 11.1%.
- Co-authored a journal article with Prof. S. Zhou (*U of T*) and Prof. I. Ahmed (*UCI*) to present at *ICSE* 2022 and *U of T UnERD* 2021 (87% average score).
- Moderated and participated in reading groups about artificial intelligence for software engineering.

Chief Marketing Officer, *Silicon Halton's TechUnderTwenty*
Jun 2019 – Jun 2020
- Revamped the visual brand identity and marketing plan using Adobe Creative Cloud.
- Coordinated marketing campaigns on MailChimp and website updates on WordPress.
- Organized weekly meetings with a team of 40 students.
- Expanded audience by 50% and engagement by 100% across all social media and the website.

Skills

Programming *(MATLAB, Python (tf, sklearn, pd, np, plt), C/C++, Assembly, LaTeX, Unreal Engine, Git, Docker, Java, DHTML)*

Circuits, CAD *(Arduino, SolidWorks, Raspberry Pi, Verilog, LTspice, AutoCAD, Soldering, 3D Printing)*

Education

BASc in Engineering Science,
University of Toronto (St. George)
Sep 2020 – Apr 2025
- Major in Aerospace Engineering, Robotics and Mechatronics Minor, Business Certificate.
- 3.93 cGPA, 90% average, Dean's List.

International Baccalaureate Diploma, OSSD,
White Oaks Secondary School
Sep 2017 – Jun 2020
- 41/45 IB score, 97% average.
- Co-founded the *Artificial Intelligence Club*.

Awards

Dan II Black Belt, *World Taekwondo Kukkiwon*
Dec 2021
Kukkiwon-certified, international taekwondo athlete and coach with 8 years of experience.

Fessenden-Trott Scholarship Winner (C$9000), *Universities Canada*
Sep 2021
Nominated by *U of T* and selected out of nominees from every Ontario university on the basis of academic merit and extracurricular involvement.

Dean's Summer Undergraduate Research Pivot Award (C$6500),
Faculty of Applied Science and Engineering
Sep 2021
Attained Co-Curricular Record for participating in the *Undergraduate Summer Research Program*.

Amateur Radio Operator Certificate,
ISED Canada
Jul 2021
VA3UFT, Basic with Honours (100% exam score).