

Kabir is pursuing a **B.Sc. in Engineering Physics (Co-op)** with certificates in **Sustainability** and **Leadership** at the University of Alberta. His transdisciplinary studies and experiences have granted him expertise in energy technologies, decarbonization policies, and community-industry transitions. Kabir has been honoured as a [Loran Scholar](#), the inaugural William Muir Edwards Citizenship Prize winner, a University of Alberta Sustainability Leadership Award recipient, and as one of Alberta's Top 30 Under 30 by the Alberta Council for Global Co-operation.

## WORK EXPERIENCE

### Research Analyst – ETH Zurich Transdisciplinary Lab & U of A Geothermal Energy Group May 2019 – Aug. 2019

- Developed a novel Monte Carlo algorithm for quantifying parasitic load and investment risk in emergent Western Canadian geothermal projects
- Researched sociotechnical innovation factors for reutilization of oil & gas assets into geothermal resources by comparison between France and Alberta
- Two publications: 2020 World Geothermal Congress (accepted), the Journal of Energy (under review); presentation at Renewables Grid Initiative 2019

### Business Analyst – Centre for Applied Business Research on Energy & Environment May 2018 – April 2019

- Economic simulation of Alberta's electricity market, energy storage and carbon pricing scenarios using industry-standard modelling methods (Aurora XMP)
- Synthesized learnings on energy storage technologies, coal-to-gas transitions, and feed-in tariff programs through research papers and weekly news stories

### Industry Relations Consultant – Paul First Nation May 2018 – Aug. 2019

- Researched environmental and socio-economic context to help the community navigate the federal government's consultation on a coal phase-out policy
- Developed educational programming to engage the community on local air pollution issues, and co-founded a drone-based air quality monitoring initiative

### Energy Policy Analyst Intern – Pembina Institute May 2017 – Dec. 2017

- Authored the *Alberta Community Solar Guide* with a major think tank to disseminate related knowledge on business models and policy mechanics
- Contracted by the Government of Alberta to co-author a white paper aimed at explicating policies for supporting distributed electricity generation

### Undergraduate Researcher – National Institute for Nanotechnology Jan. 2017 – April. 2017

- Researched high-temperature performance of Lithium-ion batteries for energy storage and electric vehicle use under Dr. Michael Fleischauer

### Technology Commercialization & Intellectual Property Intern – TEC Edmonton Sep. 2016 – Dec. 2016

- Employed best practices in intellectual property management to conduct patent searches and prepare commercial assessment reports for new technologies

### Student Researcher – Math & Physics Lab for Plasma Engineering, Hokkaido University May 2016 – Aug. 2016

- Applied programming skills in C++ and MATLAB to build simulations and conduct computational experiments related to partial differential equations
- Gained exposure to Masters' level Physics topics in nuclear fusion technology, and proofread academic papers in LaTeX in a multilingual lab environment

### Product & Community Development Intern – SunSaluter May 2015 – Aug. 2015

- Helped a Malawian community-based organization build a sustainable business around SunSaluter's innovative solar panel rotator device
- Instrumental role in launching the SunSaluter's distribution program among schools, hospitals, churches and rural institutions within 35+ villages in Malawi

## VOLUNTEER EXPERIENCE

### VP, Outreach & Strategic Partnerships – University of Alberta Aerial Robotics Group Aug. 2016 – Current

- Managing a student organization that designs and manufactures unmanned drones for community environmental applications (e.g. air quality monitoring)
- Leading STEM outreach workshops for underrepresented students with U of A Energy Week, Edmonton Public School Board, and Verna Kirkness Program

### Editorial Contributor – The Gateway June 2018 – Current

- Wrote scientifically informed opinion editorials on environmental issues; recognized by the most prestigious Canadian student journalism accolade

### Founding Chair – Alberta Citizens Panel on Sustainable Development Jan. 2019 – May 2019

- Led a non-partisan community research project inviting academics to review provincial electoral platforms using issues-based scientific lenses
- Empowered 250+ Albertans to make informed election choices through a U.N. Sustainable Development Goals report card, receiving national TV coverage

### Speaker – Canadian Federation of Engineering Students, EWB, City of Edmonton Jan. 2018 – Jan. 2019

- Led workshops and presentations for 400+ community members about the implications of climate change on infrastructure and international development

### General Faculties Councillor – University of Alberta Faculty of Engineering Aug. 2015 – Aug. 2016

- Created a student lobbying effort for interdisciplinary minors in Arts/Sciences/Business for Engineering undergraduate students; now enacted by the faculty

### Founding Chair – City Planning Committee, City of Edmonton Youth Council Aug. 2015 – Aug. 2016

- Advocated for youth-friendly infrastructure development in the City of Edmonton, initiated a feasibility study program for municipal buildings in Edmonton

## ACHIEVEMENTS & RECOGNITIONS

- McCall McBain Loran Award (2014 - current) – valued at \$100,000
- William Muir Edwards Citizenship Award inaugural recipient (2019)
- Engineering Federation of Canada scholarship (2019)
- Sam Koliass and Family Community Leadership Award (2016, 2019)
- University of Alberta International Go-Abroad Award (2019, 2016)
- John McDonald Award for Student Journalism national finalist (2018)
- Emerald Award for Environmentalism provincial finalist (2018)
- William S. Ziegler Leadership Award (2018)
- Peter Loughheed Leadership College Stretch Experience Award (2018)
- Campus Sustainability Leadership Award – student recipient (2018)
- Canadian Prairies Group of Chartered Engineers Scholarship (2018)
- CEOx1 Day, ENMAX Power Corporation & Odgers Berntson (2017)
- University of Alberta Students Union Impact Research Award (2017)
- Queen Elizabeth Scholarship, University of Leeds – declined (2016)
- Top 30 Under 30, Alberta Council for Global Co-operation (2016)
- Faculty of Engineering Dean's Research Award (2016)
- University of Alberta Academic Excellence Scholarship (2014)