2020–2021 Year-End Review

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Educational Initiatives

NLP November
- Hosted a number of virtual tutorials on a variety of introductory and advanced machine learning topics, including data visualization, NLP, transformers, computer vision and time series analytics.
- Industry guest speakers were invited to speak to applied use cases of AI.

Mac AI YouTube Channel
- Launched the Mac AI YouTube channel, which will serve as the home for all educational and tutorial content.

CAMDEA Digital Forum Workshop
- Our Director of Education, Carlos Hinrichsen Picand presented a workshop on applications in AI with Maps and Geospatial Data to the Canadian Artificial Intelligence Machine Learning Data Science Engineering Analytics Digital Forum.

Significant Events

Neural Networking
- Over 100 total student attendees from differing McMaster University faculties.
- Event partners included DeepLite, Ametros Learning, Intact, Ernst & Young, ProteinQure, Aggregate Intellect and Distributed Compute Labs.
- Keynote speaker session was delivered by Mac AI Advisory Board Member Mathew Jordan.

Science in AI Program
- Awarded the Science Initiative Fund presented by the McMaster Science Society (MSS) to support future AI initiatives.

- Hosted a two-day event featuring Dr. Stephen MacKinnon VP Research and Development at Cyclica, Dr. Stephan Beisken Head of BioInformatics and Analytics at Ares Genetics and Zaccary Alperstein Co-Founder, Director and Machine Learning Researcher at Variational AI delivered talks about Innovation in Drug Discovery using AI.

AI/ML in Healthcare Event
- Sarrah Lal, Assistant Professor of Medicine at McMaster University, delivered a presentation to Mac AI's general members discussing artificial intelligence and machine learning in healthcare.

Project Teams

Project Expo
- Launched the 1st Annual Mac AI Project Expo aimed to showcase the project team initiatives, judged by a panel of AI Researchers from the Vector Institute alongside Mac AI Founder Andrew Leber.

Mac AI Projects
- Mac AI Project Teams worked in groups of four to seven students producing high quality AI projects which include BNA Traffic Mapper (Project Link), Style Transfer GAN: (Project Link), Radiology and AI: (Project Link), Autonomous Vehicle Project: (Project Link) and Image ISP: (Project Link).

Community Projects
- Formed a partnership with the Beasley Neighborhood Association of Downtown Hamilton to provide an ethical and efficient means of tracking and classifying the usage of public spaces to advocate for the residents of the neighborhood.
- Formed a project team to support McMaster Professor Dr. Fateme Salehi in research with tumor segmentation using AI.

MacHacks

MacHacks Winners (35 Project Submissions):
- Drive Buddy: Early-warning system for Drowsy driving thus raising the safety standards and help avoid fatal road accidents.
- Virtual Whiteboard: AR Whiteboard that allows people to collaborate accessibly and remotely.
- Airplane Optimizer: Traveling Salesman Problem Applied to Airplanes Using Quantum Computing.
- Smart Market: Automate your marketing and get the word out there with NLP.
- GenePhase: Generate Phase-Diagram Analysis.
- Delivering Vaccines Using Qiskit: API that compares classical and quantum solutions for the most efficient VRP over a selected region of the US.

MacHacks Sponsors/Partners:
- Event partners include IBM Centre for Advanced Studies, IBM Quantum, Korbit AI, Deloitte, Snapchat, McMaster Engineering Society (MES), McMaster Alumni Association and the McMaster Students Union (MSU).

Over 250 Attendees from 16 Countires:
- Attendees consisted of undergrad, graduate and upper-year high school students from Canada, United States, India, United Arab Emirates, UK, Nigeria, Algeria, Pakistan, Egypt, Turkey, Germany, Spain, Kazakhstan, Saudi Arabia, Indonesia and Bangladesh.

Mac AI Ventures

- Mac AI Ventures — presented by the McMaster AI Society — seeks to bridge technical AI development with entrepreneurship and venture capital.
- Offered pro-bono valuation services to AI start-ups along with various other services provided by our student-led consulting team. Mac AI Ventures also hosts workshops, fireside chats and informational events to educate our member base.

Consulting Team Projects
- StrainBrain: The consulting team completed a market size analysis and conducted comprehensive industry research on the cannabis industry. The team enhanced their sales strategy and also used comparable companies to develop a pricing strategy for StrainBrain's AI Budtender and analytics platform.

- ImaginAble Solutions: Successfully produced financial projections for a new medical device start-up incorporating ImaginAble Solution's aim for expansion across the North American market space, accounting for regulatory and IP fees the business will incur during the transition.

- MyPalate: Worked alongside MyPalate in client communications and assisted with industry research involving sector trends, addressable market size as well as projecting revenues along with costs through financial modelling.

Fireside Chat with Scott Pelton
- Mac AI Ventures hosted a fireside chat with Scott Pelton a McMaster Alumnus who is currently the Co-Founder of RiSC Capital, a Canadian disruptive technology early-stage venture capital fund.

Pre-incubator Program
- Formed the Pre-incubator Program for McMaster students looking to build an AI start-up.
- Program was led by the Mac AI Ventures Operations team including our experienced Pre-incubator Advisors.