Michael Dean Ah-Kiow

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SUMMARY

I am a passionate and eager geomatics engineer with a strong passion for software development. I am currently employed at Hexagon Positioning Intelligence as an R&D Engineering Intern. I have relevant work experience in software development, research and working on agile teams. Through my time at Hexagon, I have obtained a strong foundation in MATLAB, Python & C++. I am fully capable of developing with OOP, Polymorphism, and integrating API's into my own software. My goal after graduation is to enter a software engineering graduate program, to further enhanced my competence and ability as a software developer.

EDUCATION

University of Calgary
Bachelor of Science in Geomatics Engineering with a Biomedical Specialization 2021

Robert Thirsk High School
High School Diploma 2016

WORK EXPERIENCE

Hexagon Autonomy & Positioning
Research & Development Engineering Intern 2019-2020

In the research team, we focus on the development of future exciting positioning technologies, from exploiting and protecting GNSS signals to other methods of positioning. At Hexagon, I have been involved in exciting projects such as:

- High Sensitivity GNSS algorithm testing, which include software development and debugging in C++, revision control using Perforce and working in an agile team with Jira.
- Development of a Spoofing & Jamming Interference graphical user interface using Python, PyCharm and other internal tools.
- Development of a Self-driving Car which involved using Robotic Operating Systems (ROS), C++, Linux (Ubuntu), Python, Perforce and Other Internal tools.
- Analysis, Visualization and manipulation of massive GNSS & Inertial datasets (such as drones, self-driving cars, static positioning and high multipath positioning) to better improve positioning algorithms.

University of Calgary
Undergraduate Research Assistant 2018

- Utilized an array of 3D Time of Flight cameras to measure antler growth of reindeers for medical applications. (Result of my work is available upon request)
- Processed point clouds using Cloud Compare for point picking, registration, and visualization.
- Implemented codes in C^{++}, MATLAB and worked with software development kits (SDK).

EXTRA CURRICULAR EXPERIENCE

St Peter's Roman Catholic Church
Member of the Audio/Video Ministry 2018-Present

- Helped set up the sound system and musical instruments before mass.
- Controlled PowerPoint slideshows, music scripts and a soundboard during mass.

University of Calgary
Vice President Academic of the Geomatics Engineering Student Society (GESS) 2018-Present

- Served as a liaison between the faculty, the society and the students in Geomatics Engineering.
- Involved in the planning of academic events and department meetings such as Geomatics Exposition 2018 and the National Geomatics Competition.
- Created exciting research opportunities with Dr. Shahbazi in the department of geomatics for first year students in various fields, including photogrammetry, low cost GNSS positioning and innovative mapping solutions.

University of Calgary
Secretary of the Geomatics Engineering Student Society (GESS) 2017-2018

- In charge of completing paperwork and recording meeting minutes for the council.
- Volunteered in all student-run events by the council including outreach, fundraising and other events.

FUSE Collective Design Club
Team Member 2016-2017

- Responsible for designing a shelter for Twin View's community garden.
- Worked under strict deadlines to submit reports, technical drawings, and presentations.

Robert Thirsk High School
Teaching Assistant for Math 30-1 class 2014-2015

- Provided one on one peer tutoring and mentorship for students in need.
- Assisted the professor with grading and other paperwork.

VOLUNTEERING EXPERIENCE

- Drop-in Center Calgary (2019) – Plated food for the homeless.
- Annual Volunteer at Feed the Hungry (2017) – Catered and served food at the event.
- Occasional Linesman for soccer games at Robert Thirsk High School (2015)– Helped officiate playoffs game.
- Presenter at Thirsk Innovation Night (2015) – Designed a "frictionless" ramp and presented our project to a one-night event for parents and visitors.
- Breakfast shift volunteer at the Mustard Seed (2014) – Made and served pancakes.

SCHOLARSHIPS AND AWARDS

- 2016: President's Admission Scholarship. (Value: $4,000)
  Entrance scholarship to the engineering program for exceptional academic merit.
- 2016: Seymour Schulich Academic Excellence award. (Value: $37,200)
  Full ride scholarship to the engineering program for exceptional academic merit.
- 2016: Alexander Rutherford Scholarship. (Value: $2500)
- 2017: Jason Lang Scholarship. (Value: $1000)
- 2017: Geomatics Engineering "25th Anniversary" Award. (Value: $2,900)
- 2018: Schulich Sponsored Undergraduate Student Research Award. (USRA) (Value: $6000)
- 2018: Undergraduate Summer Research Super Work Wage Subsidy Award. (Value: $1000)
- 2019: Sean Studer Memorial Scholarship (Value: $1500)
- 2020:

OTHER ACHIEVEMENTS AND RECOGNITIONS

- Dean's List Schulich School of Engineering.
  Recognition for maintaining a minimum GPA of 3.6.
- Finalists and Bronze Medalist at the National Geomatics Competition 2020 (300$)
  Represented the University of Calgary at the national competition for geomatics engineers.
- Honor roll at Robert Thirsk High School
  Academic excellence achievement by maintaining a 90%+ average for 3 consecutive years.

SPORTS & OTHER TEAM ACTIVITIES

Hexagon Autonomy & Positioning
Representative for Hexagon AP at The Calgary Corporate Challenge 2019-2020

- Participated in soccer, bowling and badminton events.
- Semi Finalists in badminton and quarter finalists in Soccer.

University of Calgary
Member of a soccer Intramural team 2018-2020

- Part of a student led soccer team for 3 consecutive years.
- Finalists in mixed competitive in 2019

Robert Thirsk High School
Member of Track and Field Team 2014-2015

- Participated in various events, such as relay, (4 x100m) and long jump.

Member of Badminton Team 2013-2015

- Played mixed doubles at the junior, intermediate, and senior levels. (3 consecutive years)

UDEMY CLASSES

- CPSC101: Theory behind programming by Kurt Anderson
- ENSF101: Plan & Execute Better Software by Kurt Anderson
- C++ Programming - Beginner to Beyond by Frank J. Mitropoulos
- The Python Mega Course by Ardit Sulce Founder and Author of PythonHow

MEMBERSHIP & ASSOCIATIONS

- First Year Scholars: Scholars recognized for their academic excellence.
- Club Francais: Lingual club with various student run events.
- Soccer Intramurals
- Geomatics Engineering Student Society (GESS)
- Engineering Student Society (ESS)
- Biomedical Engineering Student Society (BMESS)
- Fuse Collective: Design club with the sole purpose to help the community.
- St Peter's Parish: Roman Catholic Church
- Schulich Scholars: Group for Seymour Schulich Scholarship recipients.
- Intervarsity of Christian and Fellowship: Student run club for Christians.
- Novatel Prediction and Algorithm Club: Novatel Run lunch club to explore Kalman and Bayes' filters.

SIDE PROJECTS

A Simultaneous Localization and Mapping Miniature Car - Using ROS C++ & Ubuntu as OS.

A plotting tool in Python 3 – Using Matplotlib, Pandas and Argparse.

A modern and efficient least squares package capable of pre-analysis, post update adjustment and provide accuracy contours.

INTERESTS AND HOBBIES

- Sports: Soccer, Badminton, Bowling and Track.
- Language: French and English.
- Interest: Travelling, watching soccer, and reading.
- Software Language: Python, C++ and MATLAB.