MICHAEL AH-KIOW

GEOMATICS ENGINEER
SOFTWARE DEVELOPER
INVESTOR

CONTACT

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Address
545 Citadel Way NW
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EDUCATION

High School Diploma
Robert Thirsk High School
2013-2016

B.Sc. Geomatics Engineering
University of Calgary, Canada
2016 - 2021

M.Eng. Software Engineering
University of Calgary, Canada
2021-2022

EXPERTISE

- Object Oriented Programming
- Software Dev (Python, C++)
- Front End (CSS3 & HTML5)
- Independent Learner
- MATLAB & Prototyping
- Revision Control (Perforce, GIT)
- Problem Solving & Debugging
- Time Management

PROFILE

Hello, I am a geomatics and software engineer who is passionate about making this world a better place. I'm currently finishing up my bachelor in Geomatics Engineering and will be going into a Master of Software Engineering at the University of Calgary. I'm easy to work with, a critical thinker and an independent learner. I have industry experience in software development, research and working on agile teams. I have a strong foundation in Python, MATLAB & front-end development. I am capable of OOP, Polymorphism, and integrating API's into my own programs! Feel free to visit my website at www.drivenengineer.ca

PROFESSIONAL EXPERIENCE

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

Hexagon focuses on the development of 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.

Undergraduate Research Assistant
University of Calgary I 2018

My research consisted of applying 3D time of flight sensors to measure antler growth of reindeers at Spy Hill Campus for medical applications.

- Design and Implement a test setup using Time of Flight Cameras (lidar) to monitor the growth and dimensions of Antler.
- Processed point clouds using Cloud Compare for point picking, registration, and visualization.
- Implemented various analysis and test scripts in C++, MATLAB and worked with industrial software development kits (SDK).

CERTIFICATIONS

- Udemy: Modern HTML & CSS
  By Brad Traversy (Udemy)
- SOLID Principles: Software Architecture & Design
  By Sujith George (Udemy)
- Machine Learning A to Z
  By Kirill Eremenko (Udemy)
- Python, SQL & Tableau
  By 365 Careers (Udemy)
- Advanced Python
  by Armendariz (Udemy)

REFERENCES

Dr. Ivan Detchev
Engineering Professor
PhD, MSc, Geomatics Engineering
i.detchev@ucalgary.ca

Darrell Anklovitch
Principal Engineer - Supervisor
Hexagon Autonomy & Positioning
Darrell.Anklovitch@hexagon.com

Sean Blair
Volunteering Supervisor
sean.blair@shaw.ca

SOCIAL

Github
github.com/micdean19

Facebook
facebook/MicDean19

Linkedin
linkedin.com/in/michaelah19

VOLUNTEERISM

St Peter Roman Catholic Church

Drop-In Center

The Mustard Seed

Feed the Hungry

Robert Thirsk High School (Math Tutor)

Geomatics Engineering Student Society

EXTRACURRICULAR ACTIVITIES

Vice President Academic
Geomatics Engineering Student Society I 2018 - 2019

I served as a liaison between the faculty, the private sector, and the society. My job consisted of creating research positions, host career fair and research mixers.

- Collaborated with 4 professors to create 6 research positions in photogrammetry and positioning software development.
- Interviewed 12 applicants and filtered more than hundreds of resumes
- Involved in the planning of academic events and department meetings

Engineering Student Team Member
FUSE Collective Design Club I 2016 - 2017

FUSE collective is an engineering and design club that creates, designs, and participates in real initiatives with real-world impact.

- Involved in designing a shelter for Twin Views Community Garden
- Drafted 3 design concepts and collaborated with locals for integration.

HONORS & ACHIEVEMENTS

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 academic excellence.

2016: Alexander Rutherford Scholarship. (Value: $2500)

2017: Geomatics Engineering "25th Anniversary" Award. (Value: $2,900)

2017, 2018: Jason Lang Scholarship. (Value: $1000)

2018: Schulich Undergraduate Student Research Award. (Value: $6000)

2019: Sean Studer Memorial Scholarship (Value: $1500)

2020: Finalists & Bronze at the National Geomatics Competition
Represented the University of Calgary a national engineering competition

2020: UCBeyond Scholarship 2020 (Value: $5000):
Awarded for living above and beyond the boundaries of a chronic illness based on academic excellence, community involvement & personal ambition.

PROJECTS

Geolocation Mapping Tool
Python CLI project that plots Trajectory and errors of positioning logs.

Lidar reconstruction of reindeer's antler for Biomedical research
Utilized a Time of flight camera and their C++ API to produce a 3D lidar image of antlers in real time.

Website Portfolio (https://www.drivenengineer.ca)
A fully responsive website written in CSS3 and HTML5.

Building Modelling by Mobile Phone Photogrammetry
Engineering Capstone supervised by Dr Lichti. (Currently in Progress)