

MITCH KRAFCZEK

GEOGRAPHIC INFORMATION SYSTEMS SOFTWARE DEVELOPER



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Ottawa, Ontario, Canada

EDUCATION

Master of Science in
Engineering
University of New
Brunswick, Fredericton,
New Brunswick
2018 – 2022

Diploma in University
Teaching, University of
New Brunswick,
Fredericton, New
Brunswick
2020 - 2020

Bachelor of
Environmental Studies,
Minor Computer
Science
University of Waterloo,
Waterloo, Ontario
2013 - 2018

SKILLS

CSS, HTML, JavaScript,
MatLab, PHP, Python, R,
R Shiny, ShinyApps, SQL
Attention to detail
Problem solving
Commerciality
Creativity
Leadership
Budget planning

PROFILE

Solution-driven geospatial information specialist with 5+ years of experience and strong JavaScript, Python, R skills. Seeking to deliver resourceful code for research, government policy, and advanced geospatial user interfaces. At Agriculture and Agri-Foods Canada, I have led the successful research and development of a future land suitability rating system and data discovery portal for the ease of access to cutting-edge geospatial tools. Looking to further advance gained geospatial and user interface skills in a role with demanding challenges.

EXPERIENCE

Soil Information Specialist
Agriculture and Agri-Foods Canada | 2020 – Present

Land Suitability Rating System Developer

Provided object-oriented software design for the determination and modelling of complex land suitability ratings. I developed and customized R packages and user interfaces for the understanding of best farming practices. Reports and technical how-to documents were produced for future client use.

- Contributed expertise in the development of products through the software lifecycle, from requirements definition through stakeholder engagements
- Facilitated customization of systems by encouraging the adoptions of open source, and emerging standard for software application development
- Organized large qualitative and quantitative datasets for leading edge research
- Presented initial findings to local farmers, University professors, and government organizations for user experiences and customer feedback
- Maintained high government standards for security and privacy
- Leveraged web mapping tools and open-source API's and packages
- Used Github for versioning control and multi-user level access to data

Data Discovery Portal Developer

I have been leading the data discovery portal project for the access to seamless information, tools, and spatially distributed data.

- Lead the development of a new user interface for the easy dissemination of geospatially derived data
- Mentored a team of 3 developers for the successful creation of a web map portal
- Developed and implemented a reporting system for access to geospatial data
- Researched and programmed advanced scientific tools for implementation into the system
- Lead and planned stakeholder meetings to receive customers feedback to improve the style, look, and feel of the user experience

Risk management
Agile methodology
User experience design
Public Speaking
Product lifecycle
management
Slack/Zoom/Teams
Google Suite
Microsoft Suite

AWARDS

GIS Scholarship
ESRI Canada, 2021

Higher Education GIS
Award
ESRI Canada, 2021

AAFC Instant Award
Agriculture and Agri-
Foods Canada, 2017

INTERESTS

Programming
Travelling
Reading
Eating
Hiking
Dancing
Formula 1
Learning
Programming

REFERENCES

Available upon
request

EXPERIENCE continued

Environmental Action Plan Project Manager (Independent Consultant)

Town of Florenceville-Bristol | 2019 – 2020

I developed and led a project bid and plan to create a climate action plan for the Town of Florenceville-Bristol. The team investigated and researched potential programs to decrease greenhouse gas emissions (GHG) in the Town while providing expert advice.

- Informed the Town to aim for a 21% decrease in GHG
- Held workshops and community stakeholder events to receive feedback

Database Compiler

Agriculture and Agri-Foods Canada | 2019 – 2019

I created, modified, and produced geodatabases for use by internal clients for increasing productivity and yields for potatoes in New Brunswick. Office 365 was used to track issues, bugs, and changes.

GIS and Remote Sensing Technician

QUEST (Quality Urban Energy Systems of Tomorrow) Canada | 2018 – 2019

I was contracted to collect and produce geodatabases for use in open-source mapping for informed and determined best management practices for the implementation of smart energy grid systems.

Soil Scientist Researcher

University of Guelph | 2017 – 2018

I researched, investigated, and compared the effects of using UAVSAR data versus RADARSAT-2 data for upscaling techniques over farms in Manitoba. The research is being used to increase productivity across farm fields in Canada

- Microwave data was used to identify regions prone to flooding and drought
- Programmed a random forest using python and ArcPy
- Handled database and web site programming tasks

GIS and Remote Sensing Technician

Agriculture and Agri-Foods Canada | 2016 – 2017

I was tasked with assisting in researching new methods to measure changes in field soil moisture values. I used ESRI's ArcGIS software to edit, process and maintain databases for NASA' SMAP satellite. I received and AAFC-AAC Instant award for partnerships between multiple divers industrial and academic intuitions.

- I was part of an 18-day validation field campaign, aiding in collecting, training, and organizing the use of scientific monitoring devices.
- Expert knowledge was leveraged for the optimizations of route planning

Laser Database Programmer

University of Waterloo | 2015 – 2016

I created and implemented an automatic system for recording and maintaining laser inventories for the University of Waterloo Safety Office.

- Programmed an automated system using JavaScript, HTML, SQL to streamline the process of obtaining and certifying lasers across the university campus