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## EDUCATION

Guelph University / 2018 - Present  
Masters of Bioinformatics (M.BINF)

University of Western Ontario / 2013 - 2017  
Bachelor of Science (BSc)  
with Honors Specialization in Genetics



## AWARDS

Dean's Honor List / 2015 - 2017  
Western Scholarship of Excellence / 2013  
Thunder Bay Metro Lions Club Bursary / 2013  
Resolute Forestry Products Bursary / 2013



## CERTIFICATIONS

- ▶ Standard First Aid & CPR
- ▶ WHIMIS
- ▶ Transportation of Dangerous Goods (TTG)
- ▶ Certified Chainsaw Operator
- ▶ EHS Laboratory Safety
- ▶ EHS Workerhealth & Safety Awareness Training
- ▶ EHS Biosafety



## INTERESTS

- ▶ piano
- ▶ swimming
- ▶ snowboarding
- ▶ fishing
- ▶ reading

# BRAM RATZ



## EMPLOYMENT HISTORY

### Ontario Ministry of Natural Resources and Forestry (OMNRF)

2016 - 2018 // Thunder Bay, Ontario, Canada

#### Fire Ranger Crew Boss

*Responsible for the direction and safety of a four person firefighter team working in high stress situations in remote areas with specialized equipment.*

- ▶ Effectively communicated objectives and delegate tasks to crew members to contain more than 30 forest fires
- ▶ Ensure all Crew members understand and apply safety regulations and procedures in the field to ensure their own safety and the safety of others
- ▶ Responsible for resolving conflicts between team members resulting from a high pressure working environment
- ▶ Organize the construction and demobilization of remote camps while working on active forest fires

### Ontario Ministry of Natural Resources and Forestry (OMNRF)

2014 - 2015 // Thunder Bay, Ontario, Canada

#### Fire Ranger Crew Member

*Member of a team of four fire fighters under the direction of a crew leader in situations that varied from daily training to high stress active forest fire duty in remote locations.*

- ▶ Maintain and repair fire line equipment to ensure proper function
- ▶ Implement containment action plans from crew leader during high stress situations on active forest fires
- ▶ Live and work as part team in remote locations for long durations of time



## RESEARCH EXPERIENCE

### Guelph University

2018 - Present // Graduate Student with Dr. Elizabeth Mandeville

#### *Within species variation of F2 hybrid offspring of Greenback Cutthroat and Colorado River Cutthroat Trout parental species*

- ▶ Developed custom pipeline to filter vcf files using compute Canada HPC clusters (SHARCNet)
- ▶ Analyzed variation in proportion of ancestry and in the interspecific ancestry accross and within hybrid families relative to their parent subspecies using bayesian clustering program, entropy
- ▶ Assessed the impact different filtering conditions had on retained loci and individuals, and how this altered read coverage and loci retained



## RELEVANT SKILLS

- ▶ Comfortable working in a linux / unix environment
- ▶ 1 year experience working with Python
- ▶ 1 year experience working with R
- ▶ Knowledge of web development frameworks: Django, flask
- ▶ Familiar with machine learning concepts: supervised vs. unsupervised learning, Bayesian models and Bayesian belief networks
- ▶ Knowledge of statistical techniques: decision trees, cluster analysis, regression models, SVM, PCA, ANOVA
- ▶ Experience working with NGS datatypes (FASTQ, BAM, VCF, MAF) and analysis tools
- ▶ Experience using high performance computing to analyze large genetic datasets
- ▶ Strong written and verbal communication skills

REFERENCES AVAILABLE UPON REQUEST