

# Mitchell Falkow

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## Education

### Rensselaer Polytechnic Institute

MS IN COMPUTER SCIENCE (2021), BS IN COMPUTER SCIENCE & MATHEMATICS (2020)

Troy, NY

2017-2021

- GPA: 3.44 (Graduate), 3.79 (Undergraduate)
- Concentrations in Artificial Intelligence, Machine Learning, and Data Science
- Relevant Coursework: Machine Learning, Natural Language Processing, Data Mining, Graph Theory, Distributed Systems

## Work Experience

### Royal Bank of Canada

AMPLIFY SUMMER ANALYST - DATA SCIENTIST

Jersey City, NJ

Jun 2020 – Aug 2020

- Developed a comprehensive solution for enhancing the quality of incident resolution data and increasing support team efficiency
- Designed a microservice architecture for recommending potential resolutions by leveraging Natural Language Processing (NLP) and technologies such as voice transcription
- Implemented a Python (Flask) microservice that integrates NLP techniques such as keyword extraction, intent classification, and summarization in order to retrieve related incidents and their solutions from an Elasticsearch index
- Selected as Finalist for *Best Internal Solution* in company-wide intern team competition

### Royal Bank of Canada

TECHNOLOGY INFRASTRUCTURE INTERN

Jersey City, NJ

Jun 2019 – Aug 2019

- Constructed a web application for real-time monitoring of internal service statuses and improving the identification of outage causes
- Produced a full-stack solution with React.js frontend, Java (Spring) for backend REST API, and MySQL database
- Co-ran an internal workshop on an introduction to machine learning and data analysis

### The MITRE Corporation

SOFTWARE ENGINEERING INTERN

Bedford, MA

May 2018 – Aug 2018

- Prototyped a DevOps dashboard for visualizing security requirements for U.S. Airforce software development teams
- Developed two Java (Spring) microservices and a Vue.js web-client in a multi-repository microservice architecture

## Research Experience

### Tetherless World Constellation

GRADUATE RESEARCHER

Troy, NY

Jan 2020 – Present

- Exploring the use of domain-specific knowledge graph entities for building OWL structures that represent attribute-based policies
- Developing a domain-agnostic policy tool in support of Master's thesis (📄 [hansidm/policy-tool](#))

## Technical Skills

### Languages:

Python, JavaScript, Java, SQL, NoSQL (Elasticsearch, MongoDB, SPARQL)

### Python Modules:

NumPy, SciPy, scikit-learn, pandas, Flask, Keras/Tensorflow, RDFLib

### JavaScript Frameworks:

TypeScript, React.js, Material-UI, Node.js, Express.js, Vue.js

### Java Frameworks:

Spring, Hibernate, Lombok

## Extracurriculars

### Shorin-ryu Shidokan Karate

3RD DEGREE BLACKBELT, VOLUNTEER INSTRUCTOR

Mahwah, NJ

Jan 2008 – Present

- Instructing traditional Okinawan karate classes for children and adults

### coding&&community

VOLUNTEER INSTRUCTOR

Troy, NY

Sep 2018 – Feb 2020

- Leading weekly introductory Python, Arduino, and web development lessons for local 6th-9th graders
- Volunteering for multiple outreach programs throughout year, including hackathon-style events