

# CHRISTOPHER J. ROBERTS

RESEARCHER | DATA ANALYST

[frodnar.github.io](https://frodnar.github.io) 

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Saint Paul, MN, USA 

## EDUCATION

M.S. CHEMISTRY, 3.80 GPA  
University of Minnesota  
2010 – 2012

B.A. CHEMISTRY & MATH, 3.88 GPA  
Saint Olaf College  
2006 – 2010

## SKILLS

IP landscape analysis  
Patent and literature research  
Competitive intelligence  
Python programming  
Data visualization  
Mathematical modelling  
Command line searching (STN)  
Chemical database searching  
Technical writing  
Information research consulting  
Project management  
Technical training development  
Microsoft Excel and Power BI

## AWARDS

CIRCLE OF TECHNICAL EXCELLENCE  
AND INNOVATION (DIVISION-LEVEL)  
3M  
2018

NSF GRADUATE RESEARCH FELLOW  
National Science Foundation  
2010-2015

## INTERESTS

Technology forecasting  
Natural language processing  
Mindfulness & positive psychology  
Virtual volunteering

## PROFILE

Information researcher with >3 years of experience delivering patent landscapes, targeted IP searches, and competitive intelligence to internal clients. Intellectually curious with a track record of delivering strategic insight via innovative analytic approaches and using diverse data sources. Experienced in mathematical modelling and data visualization, and proficient in Python. Strong skills in developing project scopes and relationships with a wide range of clients from the lab to the C-suite.

## WORK EXPERIENCE

### ADVANCED TECHNICAL INFORMATION ANALYST

3M Company | 2017 – Present

Consulting with internal clients on intellectual property research projects, tools, and methods.

- Led and executed competitive IP analyses for priority technology platforms with focus on Corporate R&D, Industrial, and Transportation groups.
- Researched and delivered five bespoke technology assessments, including patents, literature, and market landscapes for 3M's CTO since 2017. Deliverables included hour-long presentations, executive summaries, and detailed research bibliographies.
- Evaluated >30 IP analysis software products and technologies since 2017. Developed a standardized framework for measuring relative value of disparate platforms.
- Conceived and led a seven-person project using Python to consume and analyze data from a patents API. Successfully created a novel partner scouting capability for a 3M business development group during a dedicated, one-week project hack.
- Independently developed a fully automated method of time series modeling for forecasting IP volumes in crowded technology spaces. Used by 3 of 4 strategic planning teams company-wide at the business group level.
- Co-organized four, annual IP analysis workshops. Half-day sessions reached over 300 clients.
- Conducted >150 in-depth IP searches for internal R&D and Legal clients in 2019, consistently increasing output and range of technical fields in searches delivered.
- Trained IP search and analysis users and promoted chemical IP research tools company-wide.
- Individually chosen by management to gain additional skills through sponsored attendance at a week-long machine learning bootcamp in July 2020.

### EXTERNAL REGULATORY ANALYST II

Saint Jude Medical | 2017

Investigated the regulatory reportability of cardiac rhythm management device complaints.

- Completed >500 case reporting decisions and reported to relevant US and EU authorities.

### CONTRACT CHEMIST

Ecolab RD&E | 2016 – 2017

Lab-based role evaluating performance of a business-critical, disinfectant product.

- Successfully validated reformulation >40% ahead of schedule, accelerating product launch.

### GRADUATE RESEARCH AND TEACHING ASSISTANT

University of Minnesota Chemistry | 2010 – 2016

Synthesized novel metal-organic complexes and served as X-ray crystallography TA.

- Composed 40-page master's thesis and published one co-authored, peer-reviewed article.

### VISITING GRADUATE RESEARCH FELLOW

University of Jyväskylä, Finland | 2013 – 2014

Computationally explored metal-organic complexes and characterized reaction mechanisms.

- Published three co-authored, peer-reviewed articles in collaboration with international teams at UC Davis and several Canadian universities.