CHRISTOPHER J. ROBERTS

RESEARCHER | DATA ANALYST

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 executing patent landscapes, targeted IP searches, and competitive intelligence for internal clients. Intellectually curious with a track record of delivering strategic insight via innovative analytic approaches while using diverse data sources. Experienced in mathematical modelling and data vizualisation, 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 half hour 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.
- 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.