

# Chris Coughlin

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Analytical-minded Data Scientist with more than 15 years of experience demonstrating a strong ability to deliver complex insights via statistical analysis and machine learning methods. Adept at analyzing and interpreting large datasets, and at developing data science applications to deliver value. Known for strong attention to detail with a significant ability to excel in both a team and solo environment.

- LinkedIn Profile: [www.linkedin.com/in/chrisrcoughlin](https://www.linkedin.com/in/chrisrcoughlin)
- GitHub: <https://github.com/ccoughlin>
- Web: <https://www.chrisrcoughlin.com/>

## Recent Professional Experience

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### Datasite | Minneapolis, MN

#### Senior AI/ML Scientist | November 2021 - Present

- Research and develop solutions in support of Datasite's products. Current focus is on Natural Language Processing (NLP), Large Language Models (LLMs), and Generative AI (GenAI).
- "Doc Chat" interactive LLM-based chat session with a customer's files and Virtual Data Room (VDR)
- NLP + GenAI powered search: hybridized vector store search, Retrieval Augmented Generation (RAG)
- Document Classification with NLP and fine-tuned LLMs
- Retrieve and rerank deep learning investment and acquisition recommendation models
- Mentor junior scientists, interns, and others in Python, machine learning, and statistics

### U.S. Bank Wealth Management and Investment Services | Richfield, MN

#### Data Scientist - Officer | April 2019 – November 2021

- Collaborate with Global Fund Services to provide statistical analysis to answer weekly questions from executive team, such as the feasibility of forecasting dividends and demonstrating an approach to flag unusual transactions in real time
- Planned and assigned schedules and projects for an offshore data science team
- Implemented a document digitization strategy for extracting information from invoices.
- Created an AIOps incident prediction model that reads metrics from Application Performance Management (APM) systems to predict whether the application is at risk of incident, providing detailed information about the risk factors
- Developed a customer attrition model based on survival analysis and random forest, interviewing relationship managers for clients determined to be at risk by the models to learn more about them

### C.H. Robinson | Eden Prairie, MN

#### Data Science Engineer | April 2017 - April 2019

- Coordinated with Finance team and others to apply data science techniques into their workflow which were estimated to have been able to save over 200 hours of overtime per year.
- Developed a deep learning model to determine whether a document had been signed. In production it scanned more than 35,000 images per day with over 96% accuracy
- Developed an approach to handling "orphaned" documents, reading the contents of the document to place it with the correct shipment to reduce invoice processing time

### Emphysic LLC | Hopkins, MN

#### Founder & CEO | August 2015 - April 2018

- Bootstrapped with NASA funding.
- Developed a distributed algorithm for finding damage in aerospace structures, based on computer vision, machine learning, and pipeline parallelism.

### Contata Solutions | Minneapolis, MN

#### Data Science Engineer | April 2015 - February 2016

- Liaised between the Engineering Team and the Machine Learning Team to ensure all tasks were on schedule and everyone was kept informed of project status updates.

- Designed an anomaly detection system based on clustering techniques that detected unusual activity in customer reward card programs.
- Built a classification model that could generate weekly sales leads for insurance agencies.

## **Additional Experience**

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Computational Physics Programmer (Atomic Energy of Canada Limited) | Applied Physicist (Texas Research Institute) | Applied Physicist (Pipetronix Ltd.)

## **Core Competencies**

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Data & Quantitative Analysis, Data Mining, Statistical Analysis, KPI Dashboards, Algorithms, Deep Learning, Mentorship, Machine Learning, Agile, Git, Python, REST, APIs, AI, Predictive Analysis, Anomaly Detection, Software Development

## **Education/Certifications**

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**Master of Science in Physics**, Queen's University Kingston  
**Honours Bachelor of Science in Physics (Energy & Fuel Sciences Specialization)**, Lakehead University

## **Patents**

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**Distributed Mode System for Real-Time Acoustic Emission Monitoring (#US7080555B2)**