Colin O. Quinn

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OBJECTIVE: Result driven data scientist seeking a role in analytics or forecasting, leveraging a strong background in computer science, applied statistics, and energy demand modeling.

EDUCATION:

- **Graduate Education - Marquette University**- Milwaukee, WI **Graduation: May 2025**
  - Doctor of Philosophy, Computer Science
  - Master of Science, Applied Statistics
- **Undergraduate Education - Marquette University** - Milwaukee, WI **Graduation: May 2019**
  - Major: Bachelor of Science Degree in Computer Science
  - Minor: Bachelor of Science Degree in Mathematics

EXPERIENCE:

Data Scientist | Marquette Energy Analytics| Milwaukee, WI June, 2019 - Current

- Developing and deploying scalable models for natural gas demand forecasting, helping to forecast ~24% of total U.S. gas demand
- Managed a $2.2M project to disaggregate billing cycle data for over 4.5 million natural gas customers into daily estimates in 2018 (Ph.D. dissertation topic)
- Initial contributor of Marquette Energy Analytics, LLC, a start-up based on Marquette University GasDay Lab
- Turning complex data challenges into actionable guidance

Research Assistant | Dr. Richard Povinelli | Milwaukee, WI June, 2018 – June, 2019

- Sole graduate student selected to accompany Dr. Richard Povinelli on sabbatical (1 year)
- Developed Smart Natural Gas alarm system using predictive analytics and trend analysis (Masters Thesis Topic)
- Gained experience with advanced analytical thinking, modeling techniques and implementation
- Invited to speak at the 2019 International Symposium on Forecasting in Thessaloniki, Greece

Research Scientist | Ifakara Health Institute | Ifakara, Tanzania January, 2017 – June, 2018

- Developed websites to improve the public's understanding of malaria transmission, control, and elimination
- Conducted malaria vector control studies, designing experiments and generating data on mosquito responsiveness to various olfactory stimuli

Software Developer | GasDay, Marquette University | Milwaukee, WI August, 2014 - January 2017

- Contributed to both front and back end software development for a gas forecasting application
- Participated on a Scrum developing team following the agile software development methodology
- Conducted clean coding practices with C#, SQL Server, F#, JAVA, and HTML

Application Support Specialist | GasDay, Marquette University | Milwaukee, WI August, 2013 – August, 2014

- Built GasDay's forecasting model for a number of customers from start to finish. Followed different specifications for each build to verify and ensure the application is what the customer needs
- Improved my real-time comprehension skills by working under different team leaders and deciding what tasks need to be completed in what order
- Helped customers with problems they experienced, found ways to work around obstacles and other problems that come with a deliverable application

SKILLS*:*

- Python, MATLAB, JAVA, R, C#, F#, C, ASM, SQL, HTML, JavaScript, CSS, React, Redux
- VIM, cmd, npm, GitHub Copilot, Visual Studio, Visual Studio Code, Microsoft Word, Excel, PowerPoint, GIMP,
- Large Language Model (LLM) enthusiast, familiar with field literature and current subscriber to ChatGPT
- Scrum Agile Software Methodology

MAJOR PUBLICATIONS*:*

- Quinn, C.O.; Povinelli, R.J.; Corliss, G.F. Alarm Forecasting in Natural Gas Pipelines, Marquette University, 2020. doi:10.3390/en28261843
- Quinn, C.O.; Corliss, G.F.; Povinelli, R.J. Cross-Temporal Hierarchical Forecast Reconciliation of Natural Gas Demand. Energies 2024, 17, 3077, doi:10.3390/en17133077
- Quinn, C.O.; Brown, R.H.; Corliss, G.F.; Povinelli, R.J. An Iterative Shifting Disaggregation Algorithm for Multi-Source, Irregularly Sampled, and Overlapped Time Series. Sensors 2025, 25, 895, doi:10.3390/s25030895
- Quinn, Colin O., Inferring Daily Gas Consumption from Multiple Nonuniformly Sampled Billing Cycles with Hierarchical Constraints (2025). Dissertations (1934 -). 3315. https://epublications.marquette.edu/dissertations_mu/3315

LEADERSHIP /ACTIVITIES/ACCOMPLISHMENTS:

- **Upsilon Pi Epsilon - Computer Science Honor Society**
  - Member of the Executive Board holding the position of Secretary
  - To be inducted, Marquette students are required to be in the top 35% of their class, hold at least a 3.0 GPA, and be recommended by three faculty members
- **Association of Computing Machinery**
  - Member of the Executive Board holding the position of Vice President 2015-2016
  - Conducted the organization of Marquette's annual programming competition, hosting 300 + high schoolers
- **Marquette University Project Management Institute**
  - Efficiently managed projects of any size
  - Conducted a series of mini-projects aimed at maximizing group productivity
- **Marquette University Magazine: Winter 2017 Issue**
  - Featured on cover with full story of my malaria research experience within the magazine

CONFERENCE/COMPETITIONS:

- **June 2019 – 39th International Symposium on Forecasting (ISF) – Energy Section Speaker – Thessaloniki, Greece**
  - Presented *"Predicting Natural Gas Pipeline Alarms"* based on early ML-based gas system alarm modeling. Work formed foundation for M.S. thesis.
  - Quinn, C.O.; Povinelli, R.J.; Collins, J.R.; Norment, J. Predicting Natural Gas Pipeline Alarms. In Proceedings of the 39th International Symposium on Forecasting; Thessaloniki, Greece, 2019; pp. 50–51
- **February 2020 - Milwaukee Engineering Research Conference (MERC) – UWM**
  - Attended data science panel hosted by UWM's Big Data Lab; focus on research-driven innovation in applied machine learning.
- **June 2020 – M5 Forecasting Competition – Organized by Kaggle & Makridakis Institute**
  - Competed in the global M5 Forecasting Competition using real-world Walmart sales data to predict demand across product hierarchies.
  - Developed scalable time series models with reconciliation across 42,000+ SKUs, leveraging machine learning and statistical baselines.
  - Focused on hierarchical coherence, prediction intervals, and real-world applicability for retail demand planning**.**
- **June 2021 – 41st International Symposium on Forecasting – Virtual Conference – Energy Section Speaker**
  - Presented *"Temporal Disaggregation of U.S. State Natural Gas Data"* showing how to derive daily estimates from monthly public consumption data.
  - Quinn, C.O.; Povinelli, R.J. Temporal Disaggregation of State Natural Gas Data. In Proceedings of the 41st International Symposium on Forecasting; (Virtual), 2021; pp. 24–25.
- **June 2022 – M6 Forecasting Competition – Structured & Unstructured Judgmental Forecasting**
  - Participated in M6 Forecasting Competition exploring judgment-based forecasting under uncertainty for financial time series.
  - Combined quantitative time series models with structured elicitation techniques to produce hybrid forecasts and assess forecast value.
  - Applied methods to macroeconomic indicators and financial asset classes to evaluate judgment integration into algorithmic forecasts.
- **July 2022 – 42nd International Symposium on Forecasting– Energy Section Speaker – Oxford, UK**
  - Presented *"Multi-source Iterative Load Shifting Disaggregation"* introducing a novel method to infer daily natural gas demand from nonuniform billing cycles.
  - Quinn, C.O.: Povinelli, R.J. *Multi-source Iterative Load Shifting Disaggregation.* In Proceedings of the 42nd ISF, 2022.
- **February 2023 - Wisconsin AI Summit**
  - Participated in statewide AI innovation summit co-hosted by the Northwestern Mutual Data Science Institute; focused on commercialization of smart data solutions.
- **March 2023 – June 2025 (Recurring) - Global AI Milwaukee**
  - Participated in community workshops and bootcamps including March 2025 and June 2025 sessions on applied AI modeling and deployment.
- **June 2023 - Summerfest Tech**
  - Engaged with panels and workshops on AI, data engineering, and technology transformation during Milwaukee's premier tech conference.
- **June 2023 – 43rd International Symposium on Forecasting – Energy Section Speaker – Charlottesville, VA**
  - Presented *"Forecasting Natural Gas Demand Using Hierarchical Frameworks"* demonstrating improved forecast coherence across regions and customer classes.

    - Quinn, C.O.: Povinelli, R.J. *Forecasting Natural Gas Demand Using Hierarchical Frameworks.* In Proceedings of the 43rd ISF, 2023.
- **April 2024 - AI Symposium: Bridging Innovation & Impact – UWM**
    - Attended symposium exploring the social, commercial, and technical implications of AI systems in modern industries.
- **June 2024 – 44th International Symposium on Forecasting – Energy Section Speaker – Dijon, France**
    - Presented *"Improving Natural Gas Demand Forecasting Through the Reconciliation of Incoherent Data Hierarchies"* detailing a framework for correcting incoherence in spatial and temporal hierarchies
    - Quinn, C.O. : Povinelli, R.J. *Improving Natural Gas Demand Forecasting Through the Reconciliation of Incoherent Data Hierarchies.* In Proceedings of the 44th ISF, 2024.
- **September 2024 - Milwaukee AI Symposium**
    - Attended regional AI industry symposium hosted by Concurrency, Inc.; explored enterprise-scale AI adoption and emerging trends.
- **October 2024 - Cybersecurity Summit – MSOE**
    - Engaged in sessions examining cybersecurity issues related to AI model development and deployment in critical infrastructure.
- **March 2025 – 5th Annual Deep Learning Workshop – Marquette University**
    - Attendee and contributor to yearly deep learning workshops hosted by Marquette, focused on neural architectures and real-world applications.
- **August 2017-2025 (Recurring) - Data Driven Wisconsin Conference**
    - Annual conference focused on big data and advanced analytics applications across industries; held at Marquette University and other local venues.

COURSES/KNOWLEDGE

- **Undergraduate**
    - **Calculus 1**
    - **Calculus 2**
    - **Calculus 3**
    - **Discrete Mathematics**
    - **Linear Algebra & Matrix Theory**
    - **Statistical Methods**
    - **Advanced Data Science (Topics in Math or Statistics)**
    - **Earth & Environmental Physics**
    - **General Chemistry 1**
    - **Introduction to Computer Programming**
    - **Object-Oriented Software**
    - **Programming Language**
    - **Data Structures / Algorithms**
    - **Data Structures / Algorithms 2**
    - **Hardware Systems**
    - **Operating Systems**
    - **Principles of Database Systems**
    - **Software Engineering (Topics in Computer Science)**
    - **Internet of Things (Topics in Computer Science)**
    - **Principles of Design**
- **Graduate**
    - **Statistical Methods**
    - **Probability**
    - **Applied Mathematical Analysis**
    - **Machine Learning**
    - **Simulation**
    - **Parallel & Distributed Systems**
    - **Regression Analysis**
    - **Applied Linear Algebra**
    - **Mathematical Statistics**
    - **Statistical Machine Learning**
    - **Data Mining**
    - **Design of Experiments**
    - **Research Methods/Prof Development**
    - **Doctoral Dissertation**