Peter N. Dobbs

peterdobbs77.github.io dobbsp8@gmail.com Open to Relocation

PROFESSIONAL EXPERIENCE

Canon Medical Informatics, Inc, Minnetonka, MN

Senior Product Analyst February 2025 - May 2025

- Highly visible role with end-to-end ownership of platform development across global teams (Minnesota, Japan, Edinburgh)
- Leading live customer experience feedback collection and experimentation
- Making data-driven decisions based on product usage and performance metrics
- Collaborating with SMEs/KOLs to share technical and medical industry knowledge with product teams

Software Engineer February 2022 - February 2025

- Championed projects to enhance integration with external data sources
- Implemented compliance to the latest Cybersecurity Guidance from the FDA
- Drove collection and analysis of product usage and performance data
- Collaborated with Product Managers and various Stakeholders across the globe to construct product roadmaps
- Led defect review board and product hazard analysis activities
- Defined and implemented new processes for handling vulnerabilities reported against an SBOM

Associate Software Engineer May 2020 - February 2022

- Designed and implemented data model for financial and operational analysis of medical imaging departments
- Developed custom Apache NiFi processors to drive ETL of HL7 and DICOM medical data
- Created visualization of hospital operations with Elasticsearch and Kibana
- Implemented ATNA-based auditing for Role-based Access Controls
- Designed data removal request process for GDPR-compliance

Marquette Energy Analytics, LLC, Milwaukee, WI

Software Developer / Product Owner October 2018 - May 2020

- Primary contact for licensed products at five of our top customer sites.
- Designed custom web data layer and Excel add-in for performing advanced analysis of energy demand forecasts
- Deploying regular updates for forecasting models on Azure
- Culture-influencer within the startup.

EDUCATION

Master of Science, Mathematical, Statistical, and Computational Sciences
Marquette University Graduate School, Milwaukee, WI

Bachelor of Science, Biomedical Engineering - Biocomputing
Marquette University Opus College of Engineering, Milwaukee, WI

APPLIED SKILLS

Programming Languages: Python, SQL, R, Matlab, C#, Java
Data Analytics: PyTorch/TensorFlow, Jupyter Notebooks, RStudio, PowerBI, Apache NiFi, Elasticsearch/Kibana, Apache Spark, LangChain
Development: Data Layers, Data Orchestration, Data Warehousing, Data Modeling, Git, Agile Scrum, CI/CD, Deon Ethical Checklist, REST API
CySec: Risk Analysis, CVSS, EPSS, VEX, SBOM, CycloneDX, DependencyTrack, ATNA auditing
Platforms: Windows, Linux, AWS, Azure
Health Standards Experience: HL7v2, HL7 FHIR, DICOM, IHE

CERTIFICATES

Agentic AI Course Certificate DeepLearning.AI 9 October 2025
Developing multi-agent systems for project planning, data analysis and visualization, customer support, market research, and more

CVSS v3.1: *FIRST Learning* 13 December 2024
Detecting and scoring security vulnerabilities according to the standard CVSS process.

A-CSPO: *Advanced Certified Scrum Product Owner* 21 November 2023

CSPO: *Certified Scrum Product Owner* 6 August 2021

QI 104: *Interpreting Data* 29 October 2018

PUBLICATIONS

Towards Developing an EMR in Mental Health Care for Children's Mental Health Development among the Underserved Communities in USA. 2021
Kazi Zawad Arefin, Kazi Shafiul Alam, Masud Rabbani, **Peter Dobbs**, Leah Jepson, Amy Leventhal, Amy Van Hecke and Sheikh Iqbal Ahamed
arXiv preprint arXiv:1706.06969

FEATURED TALKS

DICOM For Informaticists, Part 1
DICOM For Informaticists, Part 2
Pair of recorded lectures, created as a part of the SIIM CDI Series, introducing DICOM to aspiring Clinical Data Informaticists.

SIIMcast Episode 49: *Hackathon 2*
In Spring of 2020, I was invited to speak about my experiences at the SIIM Hackathon and advocate for others to participate.

Nyandwi Muzungu: *Medical Device Repair in Constrained Environments*
In November 2019, I was invited to give a talk as a part of the Global Innovation Seminar Series at University of Wisconsin. The event coordinators asked me to share some of my experiences from my trips to East Africa.

FEATURED PROJECTS

peterdobbs77

Daily Coding
Keeping my skills fresh and learning new ones. Lately I've been upskilling in Generative AI and Machine Learning.

Object Tracking
Experiments with and implementations of object detection and tracking. The main focus is on analyzing film of ultimate frisbee games, but I also have been extending my experience with eye tracking (continuing from my Eye Tracking project).

Eye Detection
This was a collaborative project to build an eye detection application. I lead the team responsible for creating the software requirements specification (SRS) for the edge detection step. I then received the SRS for the circle (pupil) detection step and implemented it in C++.

Expectation Maximization Algorithm
The EM Algorithm is an iterative method that can be used to find model parameters. This project implemented a R shiny app that takes in data from a 1-dimensional mixture model and finds the optimal parameters to represent the distribution of that data. The final product is published to peterdobbs.shinyapps.io/em-algorithm.

REFERENCES

available upon request