Peter N. Dobbs

peterdobbs77.github.io
dobbsp8@gmail

PROFESSIONAL EXPERIENCE

Canon Medical Informatics, Inc, Minnetonka, MN

Senior Product Analyst   February 2025 - May 2025
- Coordinating operations of global (Minnesota, Japan, Edinburgh) platform development teams
- Continuously maximizing product value and quality (escaped defect rate under 0.01%)
- Experimenting with new product capabilities and customer experience (CX) – Average NPS ≥ 4.8
- Performing data collection and analysis on team activities for budgeting
- Making data-driven decisions based on product usage and performance
- Collaborating with SMEs to share technical and medical industry knowledge with product teams

Software Engineer   February 2022 - February 2025
- Developing data pipelines for integration with external PACS/VNA services
- Driving collection and analysis of product usage and performance data
- Collaborating with Product Managers and various Stakeholders across the globe to inform roadmaps
- Implementing compliance to the latest Cybersecurity Guidance from the FDA
- Responsible for product hazard analysis activities
- Defining and implementing new processes for handling vulnerabilities reported against an SBOM

Associate Software Engineer   May 2020 - February 2022
- Designed and implemented novel data model for financial and operational analysis using DICOM and HL7 data
- Developed custom Apache NiFi processors to drive ETL
- Created visualization of hospital operations with Elasticsearch and Kibana

Marquette Energy Analytics, LLC, Milwaukee, WI

Software Developer   October 2018 - May 2020
- Primary contact for licensed products at five of our top customer sites.
- Developer of data access and visualization tools.
- Responsible for deploying regular updates for forecasting models on the cloud.
- Culture-influencer within the startup.

GasDay Project at Marquette University, Milwaukee, WI

Graduate Research Assistant   August 2018 - May 2020
- Involved in weekly seminar discussions of papers related to lab research

Application Developer   August 2016 - October 2018
- Created an Excel Add-In in C# for data access, analysis, and visualization.
- Collected feedback from users at various companies nationwide.

Application Support Specialist   June 2015 - October 2018
- Deployed regular updates to the energy demand forecasting AI models.
- Developed automation tools that decreased deployment time by over 20%.
- Led process improvement for product testing and team exchanges.

EDUCATION

Master of Science, Mathematical, Statistical, and Computational Sciences
Marquette University Graduate School, Milwaukee, WI, Spring 2021

Bachelor of Science, Biomedical Engineering - Biocomputing
Marquette University Opus College of Engineering, Milwaukee, WI, May 2018

APPLIED SKILLS	*Programming Languages:* Python, SQL, R, Matlab, C#, Java *Data Analytics Software:* Jupyter, RStudio, NiFi, Elasticsearch/Kibana, Apache Spark *Development Concepts:* Agile Scrum, CI/CD, Deon Ethical Checklist *Cybersecurity Fundamentals:* Risk Analysis, CVSS Scoring, SBOM, CycloneDX, DependencyTrack *Software Management:* Git, Atlassian/Jira, GitHub, *Platforms:* Windows, Linux, AWS, Azure *Health Standards Experience:* HL7 v2, HL7 FHIR, DICOM, IHE

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
First video of a pair of recorded lectures, created as a part of the SIIM CDI Series, introducing DICOM to aspiring Clinical Data Informaticists.

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

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.

CERTIFICATES

CVSS v3.1: FIRST CVSS v3.1 Certificate FIRST Learning	13 December 2024
A-CSPO: Advanced Certified Scrum Product Owner Scrum Alliance	21 November 2023
CSPO: Certified Scrum Product Owner Scrum Alliance	6 August 2021
QI 104: Interpreting Data Institute for Healthcare Improvement, Boston, MA	29 October 2018

FEATURED GITHUB PROJECTS

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.

Team Great Lakes - Team Lead
Led a team of students from Milwaukee and Chicago in the Society of Imaging Informatics in Medicine (SIIM) Hackathon at the 2018 and 2019 SIIM Annual Meeting. As Team Lead, I was directly involved in the requirements gathering and development of projects that won the hackathon in 2018 and placed third in 2019.

Assessment of Public Service Accessibility in Milwaukee

Using various open data sets for Milwaukee, WI and GIS shape files, this project qualified a relationship between adjusted gross income and calls for Emergency Medical Services (both in aggregate and in particular instances related to medical services) in different areas of Milwaukee. While investigating the topic, the deon data science ethical checklist was applied as a way to assess the implications of these findings.

REFERENCES   available upon request