

BETTINA KOZISSNIK, PhD

DATA SCIENTIST

CONTACT

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SKILLS

- **Python** – data manipulation and exploratory data analysis (EDA) using **pandas**, **numpy**, **regex**, **matplotlib**, **seaborn**, web scraping and html data manipulation with **beautifulsoup** and **requests**
- **R** – data manipulation and EDA with **tidyverse**, **dplyr**, **ggplot2**, **plotly**, interactive app development using **R Shiny**
- **PostgreSQL** – database import and manipulation (incl. complex joins)
- **AWS** – Amazon Web Services around data storage on **S3**, processing and machine learning using **SageMaker**, etc.
- **Microsoft 365 Suite**

EDUCATION

DATA SCIENCE BOOTCAMP

Nashville Software School

PhD ONCOLOGY

University College London
& The Royal Institution of Great Britain

DIPL.-ING. (equivalent to MEng)

IMC University of Applied Sciences Krems
& University of British Columbia

EXPERIENCE

PART-TIME DATA SCIENTIST

9/2019 to present

Nashville Software School | Nashville, TN

9-month part-time data science intensive with emphasis on immediate practical application of the newly acquired skills in Python, R and SQL on real-world business problems by organizing and cleaning data, exploratory data analysis, machine learning, data visualization and data storytelling.

- **Analyzing Medicare Data focusing on Provider Referrals**
Used Python to clean and prep the DocGraph Hop Teaming (Medicare) data set to join with other data sets containing provider and other relevant information. The analysis revealed that the majority of referrals to hospitals were made by radiologists, cardiologists, family providers and surprisingly nephrologists.
- **Mid-Course Capstone – Competitive Boston Marathon**
Web scraping Boston Marathon results with Python, followed by exploratory data analysis (EDA) and visualization in R and R Shiny to investigate the increasing competitiveness and racing strategies of successful re-qualifiers at the Boston Marathon
https://kozissnikb.shinyapps.io/Competitive_Boston/
- **Final Capstone – StackOverflow NLP Analysis & Prediction**
Used Python to scrape StackOverflow questions, EDA, natural language processing and machine learning. Data visualizations in R, as R Shiny dashboard to investigate potential trends around the key programming languages in data science: Python, SQL and R
https://kozissnikb.shinyapps.io/DataScience_Stack/

HEALTH & SAFETY ADMINISTRATOR

3/2019 to 4/2020

Cintas Corporation | Nashville, TN

- Building a company culture around health and safety by making safety personal and hopefully enabling OSHA VPP certification soon
- Responsible for daily safety audits of plant operations, production and related documentation, as well as continuous health and safety training for all partners
- Re-organized and streamlined documentation to improve completion and to shift the focus to partner safety in the plant

TRANSPORTATION COORDINATOR & INTERNAL FOOD AUDITOR

11/2016 - 2/2019

Second Harvest Food Bank of Middle TN | Nashville, TN

- First point of contact for partner agency pick-ups, responsible for coordination of food donation pick-ups from stores, distribution centers, food manufacturers and other corporations throughout 46 counties of Middle Tennessee
- Performed bi-weekly internal food safety audits to ensure compliance with AIB standards and to build a company culture around food safety
- Streamlined document flow and supported inventory through billing of orders, receiving and logging of food donations within the enterprise resource planning software Macola
- Implemented a routing software to help reduce fleet costs

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EXPERIENCE

OFFICE MANAGER & EXECUTIVE ASSISTANT

03/2016 - 11/2016

The Brookstone Group | Nashville, TN

Construction company specialized in building high-end housing and industrial solutions.

- Responsible for day-to-day operations, including purchasing, billing, accounting, and payroll for multiple building projects, as well as the company itself and creating corresponding financial reports for stakeholders
- Performed accounting audit to reconcile inaccurate accounts and rectified incorrect past accounting practices
- Implemented new project management software BuilderTrend to increase office efficiency and reduce costs

RESEARCH ASSOCIATE & LAB MANAGER

03/2012 - 02/2014

University of Florida | Gainesville, TN

- Designed and executed research projects around biomedical applications of magnetic nanoparticles, such as investigating the diagnostic potential of magnetic nanoparticles for osteoarthritis of the knee, including extensive physical characterization of magnetic nanoparticles, as well as corresponding data analysis using SPSS and MS Excel.
- Prepared manuscripts, grant applications and IACUC applications
- Other responsibilities included purchasing of lab supplies, safety documentation, assisting, training and mentoring graduate, undergraduate and summer students, as well as giving guest lectures as part of different courses (BME1008, BME4931 & EMA6938)

PUBLICATIONS

Garraud, A., Velez, C., **Kozissnik, B.**, Garraud, N., Yarmola, E. G., Allen, K. D., Dobson, J. & Arnold, D. P. (2015). Investigation of the capture of magnetic particles from high-viscosity fluids using permanent magnets.

IEEE Transactions on Biomedical Engineering. 63(2) 372-378

Yarmola, E. G., Kaufman, Z. A., Arnold, D. P., Shah, Y., **Kozissnik, B.**, Garraud, A., Dobson, J. & Allen, K. D. (2014). Probing Osteoarthritis Biomarkers with Magnetic Nanoparticles. *Biophysical Journal*, 106(2), 624a.

Kozissnik, B., Bohorquez, A. C., Dobson, J. & Rinaldi, C. (2013). Magnetic fluid hyperthermia: Advances, challenges, and opportunity. *International Journal of Hyperthermia*, 29(8), 706-714.

Kozissnik, B. & Dobson, J. (2013). Biomedical applications of mesoscale magnetic nanoparticles. *MRS Bulletin*, 38(11), 927-932.

Bullivant, J. P. Zhao, S. Willenberg, B. J., **Kozissnik, B.**, Batich, C. D. & Dobson, J. (2013). Materials Characterization of Feraheme/Ferumoxytol and Preliminary Evaluation of its Potential for Magnetic Fluid Hyperthermia. *International Journal of Molecular Sciences*, 14(9), 17501-17510.

BOOK CHAPTER

Kozissnik, B., Green, L. A., Chester, K. A., & Thanh, N. T. K. (2012). Strategies for Functionalisation of Magnetic Nanoparticles for Biological Targets. *Magnetic Nanoparticles: From Fabrication to Clinical Applications*, 129ff