Masoud Khani

PhD. Student

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EDUCATION

- **Ph.D. in Biomedical and Health Informatics** — Milwaukee, WI, USA
  University of Wisconsin-Milwaukee — *Sep. 2021 - Present*
  - Currently pursuing a Ph.D. in Biomedical and Health Informatics with a focus on machine learning and data analytics.
  - Currently maintaining a GPA of 4.0.

- **Master of Science in Computer Science** — Milwaukee, WI, USA
  University of Wisconsin-Milwaukee — *Jan. 2020 - Aug. 2021*
  - Conducted research on medical image segmentation using machine learning techniques, resulting in a thesis titled "Medical Image Segmentation using Machine Learning."
  - Graduated with a GPA of 3.9 and received the Outstanding Graduate Student Award in Computer Science.

- **Bachelor of Computer Software Engineering** — Tehran, Iran
  Tehran Azad University — *Sep. 2014 - Jun. 2018*
  - Conducted research on fall detection in the elderly using machine learning techniques, resulting in a thesis titled "Fall Detection in Elderly with Smartphones via Machine Learning Techniques."
  - Graduated with a GPA of 3.5.

EXPERIENCE

- **Research Assistant** — Milwaukee, WI, USA
  University of Wisconsin Milwaukee - Biomedical Data and Language Processing (BioDLP) Lab. — *Sep. 2021 - Present*
  - Analyze data using machine-learning algorithms, including data mining, natural language processing, and knowledge representation and modeling.
  - Implement a pipeline for preprocessing the Healthcare Cost and Utilization Project (HCUP) dataset to reduce preprocessing wait time by 80%.
  - Develop systems to integrate biomedical language processing into industrial applications such as electronic medical records (EMR) data to make accurate disease predictions.
  - Build a pipeline to extract data from Froedtert Hospital and Children's Hospital of Wisconsin and statistically analyze patients' demographics.

- **Project Assistant** — Milwaukee, WI, USA
  University of Wisconsin Milwaukee - Northwestern Mutual Data Science Institute — *Jan. 2021 - Present*
  - Collect and analyze student enrollment and behavior data for each semester for data science disciplines.
  - Develop an open-source repository for data science applications in different disciplines.

PUBLICATIONS

1. Tong, L., **Khani, M.**, Lu, Q., Taylor, B., Osinski, K., Luo, J. (2023). Association between body-mass index, patient characteristics, and obesity-related comorbidities among COVID-19 patients: A prospective cohort study. *Obesity Research Clinical Practice*, 17(1), 47-57. DOI: 10.1016/j.orcp.2022.12.003

2. Feller, C. N., Adams, J. A., Friedland, D. R., **Khani, M.**, Luo, J., Poetker, D. M. (2023). Impacts of socioeconomic status on dentoalveolar trauma. *WMJ*, 122(1), 32-37.

FOCUS AREA

- Utilizing machine learning techniques and optimization methods
- Analyzing the performance of machine learning models using statistical metrics
- Modeling and analyzing features in neural networks
- Analyze the big data using partitioning and approximation algorithms to provide visual representations.

PROGRAMMING SKILLS

- **Machine Learning Techniques**: Tesnforflow 2.x, Keras, Scikit learn, PySpark , Ensemble traditional and pre-trained models, d Transfer Learning, LSTM and YOLO
- **Languages**: Python 3.x, R , Java
- **Datebase:** MySQL, PostgreSQL , Sql Server , BigQuery
- **Data Visualization**: MatplotLib, Seaborn, ggplot2, Tableau
- **Big Data**: Spark, Dask, Rapids, Ray
- **Cloud Technologies**: AWS EC2, S3, Google Colab, Google Compute, Google Big-Query

AWARDS

- **Chancellor's Graduate Student Award ($ 6000)** 2020