SARAMA SHEHMIR

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Professional summary

Focused machine learning and databases professor offering 10 years of success in academic roles. Supports students in exploring course content, degree paths, and potential career choices. Guides progress through expertly crafted curriculum and continuous drive to provide equitable and engaging instruction.

Skills

- Version control tools: subversion, rtc, git, github, gitlab, bitbucket
- Languages: Python, R
- Data visualization: tableau, excel, seaborn, shiny
- Databases: SQL
- Machine learning libraries: scikitlearn, tensorflow

EXPERIENCE

Graduate Teaching Assistant, Computer Science Dept   **September 2016 - Current**
Toronto Metropolitan University, Toronto ON, Canada

- Delivered curriculum for lab-based courses including CPS-853 Creating Big Data Systems, CPS-510 Database Systems I, CPS-621 Introduction to Multimedia Systems, and CPS 590 Operating Systems I
- Conducted data cleaning and analysis using HDFS, PIG, and R.
- Mentored students on academic progress and career goals.
- Utilized learning management systems LMS like Canvas or Blackboard for organizing course content and communication with students.
- Facilitated group discussions to enhance students' understanding of course content.
- Attended department meetings to stay informed about program updates and changes.
- Ensured compliance with university policies regarding grading standards, academic integrity, and accessibility accommodations.

Data Science Research Intern   **May 2023 - May 2024**
PledgX | Toronto, Ontario

- Supported grant-writing efforts by providing quantitative evidence demonstrating success of prior research initiatives.
- Reviewed academic literature to identify gaps in knowledge and inform development of research questions.
- Conducted statistical analyses on large datasets using R, Python, and other programming languages.
- Identified opportunities for process improvement within existing workflows by leveraging advanced analytics techniques.
- Created visualizations using Tableau, PowerBI, or similar tools to effectively communicate key findings from data analyses.
- Collaborated with interdisciplinary teams to analyze complex datasets and generate actionable insights.

Professor   **May 2023 - Current**
Humber College (Longo Faculty of Business)

- Developed and delivered curriculum for courses including BIA 5302 – Machine Learning I and BIA 5402 – Machine Learning II
- Ensured student awareness of course objectives, approach, and evaluation techniques.

Instructor (Data Analytics for Business)   **September 2022 - July 2023**
St. Clair's College, Mississauga

- Developed and delivered curriculum for courses including Advanced Statistics (R), IT Service Management, Ethics in Data Science, Financial Analytics (Python), Capstone Project, and Marketing Analytics (R).
- Assessed student's education and adjustment needs through direct observation and testing.
- Provided individualized support for struggling learners.
- Evaluated student performance and provided constructive feedback.
- Adapted teaching style to accommodate diverse learning styles.
- Adjusted course outlines annually, keeping information up to date and relevant.
- Served as mentor for new instructors within department.
- Implemented various assessment tools to measure instructional effectiveness.
- Collaborated with and supported colleagues regarding research interests and co-curricular activities.
- Assessed student progress through quizzes, tests, and projects.

Junior Data Scientist   **March 2018 - March 2021**
Hudson's Bay Company (The Bay), Toronto ON, Canada

- Utilized statistical techniques to develop prototypes and scalable data analyses
- Implemented a machine learning regression model for time series prediction, resulting in a 2% increase in quality and a 10% reduction in operating costs.

Principal Consultant   **September 2017 - February 2018**
PostBeyond Inc., Toronto ON, Canada

- Developed a hybrid recommender system for a client specializing in content distribution and employee social sharing.

Graduate Research Assistant, Computer Science Dept   September 2016 - February 2018
Ryerson Artificial Intelligence Lab, Toronto ON, Canada | Toronto, Ontario

- Developed end-to-end machine learning prototypes and scaled them to production environments, increasing efficiency by 8%
- Diagnosed and resolved predictive analytical model performance issues, contributing meaningful improvements to existing models.
- Conducted routine and standardized experiments using research techniques specific to research project subject matter.
- Assisted with data collection, analysis and review for publication and presentation.

Lecturer   **October 2011 - July 2015**
Bahria University, Karachi, Pakistan

- Developed and delivered curriculum for courses including CSC-110 Computing Fundamentals, CSC-113 Computer Programming, and CSS-210 Object-Oriented Programming.
- Promoted critical thinking, personal development and commitment with custom lectures and assignments.
- Harnessed digital advancements and technology to boost comprehension and complement analog instruction.

- Conducted research relevant to field of expertise and published findings in peer-reviewed journals or books.
- Measured programs against student outcomes and national standards to gauge success.

EDUCATION

PhD in Electrical and Computer Engineering - Machine Learning and Generative AI   May 2027
Toronto Metropolitan University, Toronto, ON

Master's in Computer Science   September 2021
Ryerson University, Toronto, ON

Master's in Software Engineering   August 2013
BUKC, Pakistan

B.S in Computer Engineering   December 2010
SSUET, Pakistan

AFFILIATIONS

Director, CSGSC, 05/2022, 04/2023, Mentoring and facilitating current graduate students, providing counseling, and connecting the department to student issues.

PUBLICATIONS

1. AboulEla, S., Ibrahim, N., Shehmir, S., Yadav, A., & Kashef, R. (2024). Navigating the cyber threat landscape: An in-depth analysis of attack detection within IoT ecosystems. AI, 5(1), 704-732.

2. Shehmir, S. S., Nazar, M., Zaveri, A. A., Sami, N., Mashood, R., Faisal, N., Waqas, A., & Naeem, R. (2024). Enhancing the shopping experience in e-commerce: A path to improvement – Buy the best. *Bulletin of Social Informatics Theory and Application, 8(1), 152-164.

3. Zaveri, A. A., Mashood, R., Shehmir, S., Parveen, M., Sami, N., & Nazar, M. (2023). AIRA: An intelligent recommendation agent application for movies. *Journal of Informatics and Web Engineering, 2(2), 72-89. https://doi.org/10.33093/jiwe.2023.2.2.6

RESEARCHGATE

- https://www.researchgate.net/profile/Sarama_Shehmir

WEBSITE, PORTFOLIO AND PROFILES

- https://www.linkedin.com/in/saramakamal/
- https://scholar.google.com/citations?hl=en&user=IKJC5usAAAAJ

REFERENCES

Available upon request