Fatemeh (Nazanin) Hasheminejad

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Summary of Qualifications

- Over 3 years of experience in data analytics, time series, and dynamical systems with a Master's degree in Mathematics and Statistics and a Bachelor's in Computer Science.
- Proficient in data manipulation and analytics tools including Python, R, SQL, Tableau, and MS Excel, with a strong foundation in programming and algorithm development.
- Certified in Time Series Analysis by the State University of New York.
- Published author in the IEEE Control Systems Letters journal for pioneering work in game theory, and an experienced presenter at international conferences, effectively communicating technical information.

Areas of Expertise

- Data Visualization and Reporting
- Time Series Analysis
- Data Processing
- Dynamical Systems
- Dashboard Development
- Statistical Modeling
- Forecasting Analytics
- Differential Geometry

Technical Skills

- **Languages/Scripting:** Python, R, SQL, Java.
- **Applications:** Tableau, Excel, Microsoft Power Apps, Maple, Familiarity with Power BI, and Microsoft Azure.
- **Libraries:** Numpy, Pandas, Matplotlib, BeautifulSoup.

Education

Brock University St. Catharines, ON
M.Sc. in Mathematics and Statistics (GPA: 3.6) 09/2021 – 09/2023
- **Related Courses:** Baysian Network, Linear Algebra, Differential Geometry, Dynamical Systems.

Amirkabir University of Technology (Tehran Polytechnic) Tehran, Iran
B.Sc. in Computer Science (GPA: 3.6) 09/2016 – 09/2021
- **Related Courses:** Stochastic Processes, Data Base, Linear Optimizatoin.

Experience

Stat & Math Instructor 09/2023–Present
Niagara College Niagara Falls, Canada
- Instructing "Statistical Concepts", focusing on statistical modeling and providing comprehensive coverage of both descriptive and inferential statistics.
- Utilizing Tableau visualizations and Google Forms to enhance practical learning, significantly boosting student engagement and improving overall course performance by 40%.

Teaching Assistant 09/2021–Present
Brock University St. Catharines, Canada
- Collaborating in courses including Statistics, Differential Geometry, Calculus, and Linear Algebra.
- Leading Python, Excel, and Maple labs, managing grading, and facilitating question-and-answer sessions to support student learning and assessment.

Scientific Researcher 09/2021–09/2023
Brock University St. Catharines, Canada
- Addressed a fundamental problem in the field of game theory, with the results published in IEEE Control Systems Letters.
- Developed a Python program to check the equilibrium convergence for different states of the problem.

Python Developer Intern 03/2016–06/2016
HamiAndishe Company Tehran, Iran
- Developed a Telegram chatbot using Python to streamline the travel booking process, enhancing user experience and operational efficiency.
- Implemented data extraction and transformation processes for various data types, including JSON, SQL, and NoSQL databases, using SQL and Python to support data analysis and reporting tasks.
- Conducted data analysis on user interaction and booking trends, providing insights that resulted in a 30% increase in user bookings and a 10% reduction in customer service inquiries over 2 months.

Publications

- N. Hasheminejad and P. Ramazi, "Equilibration of Coordinating Imitation and Best-Response Dynamics," in *IEEE Control Systems Letters*, vol. 7, pp. 3078-3083, 2023, doi: 10.1109/LCSYS.2023.3292049.

Projects

Wait Times Analysis in Canadian Healthcare [Link]

- Utilized the "Wait Times for Priority Procedures in Canada" dataset, published on April 2, 2024, by the Canadian Institute for Health Information (CIHI).
- Conducted a time series analysis to identify the best-fitted model using R. Forecasted future wait times in Canadian healthcare using SARIMA and SSE-developed models.

EnerGraphix Analytics [Link]

- Developed a relational database to manage comprehensive datasets on energy consumption, leveraging T-SQL and Python with libraries including PyODBC, ensuring data integrity and quality through detailed source-to-target mapping.
- Consolidated and documented metadata for key data attributes to ensure data validity and facilitate accurate analysis.
- Created insightful visualizations using Tableau to reveal patterns in energy use and electricity sourcing across different countries, supporting data-driven insights.

Covid [Link]

- Validated, refined, and transformed COVID-19 data spanning from 2020 to 2024, utilizing Python and T-SQL to ensure the accuracy and reliability of the datasets for analysis purposes.
- Developed visualizations in Tableau to track COVID-19 progression, death factors, and spread correlations.
- Utilized statistical analysis to identify pandemic trends and inform mitigation strategies.

Catch Rate Forecast

- Cleaned, merged, and preprocessed data collected from the MyCatch application and creel surveys using Python and R, utilizing libraries such as bnlearn to enhance data analysis readiness and ensure data quality and integrity.
- Matched and compared data to appropriate sources to validate accuracy, identifying and analyzing root causes of any data issues or problems encountered during preprocessing.
- Identified key features impacting catch rates using Bayesian Network, aiding strategic decisions and resource management.

YouTube: Big Rolling Dice [Link]

- I create videos to provide simple explanations for complex topics and interesting papers in mathematics and computer science.

Activities

Attendee	Bootcamp on Machine Learning for Finance at the Fields Institute.	2024
Presenter	Presenting at 62nd IEEE Conference on Decision and Control in Singapore.	2023
Volunteer	Contributing to the organization of the ISBIS Conference at Brock University.	2023
Volunteer	Contributing to the organization of 50th Anniversary of CACUSS Association.	2023

Certifications

- **Practical Time Series Analysis, The State University of New York** 05/2024
- **SQL Window Functions for Analytics** 04/2024
- **Use AI Builder and Power Apps to Process Invoice Data** 04/2024

Languages

- **English:** CELPIP Level 9 (Writing: 11, Reading: 10, Listening: 9, Speaking: 9)
- **Farsi:** Native speaker

References

- Available upon request.