Hosna Hamdieh

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PROFESSIONAL SUMMARY

Creative and solution-oriented Sr. Data Scientist/ Data Engineer/ ML Engineer with ten years of proven results, optimizing time and resources. Master graduate of Applied Business Analytics from Carleton University with innovative solid problem-solving skills, critical thinking, global mindset, effective communication, and presentation skills, experienced in both start-ups and large accomplished corporations. Skilled Python developer ready to build solutions for real problems, automating data process pipelines.

TECHNICAL SKILLS

Python**,** Microsoft Office, Fast API, Azure and AWS cloud services, MATLAB, C++, Orange, Tableau, GIT
Machine Learning (ML), Natural Language Processing (NLP), Predictive and transformer-based models (BERT, GPT), supervised deep learning **|** Model testing, feature engineering and evaluation | Data pipeline automation | SQL / NoSQL Database design and structure | Solution design and development | Data Analysis, Visualization, Interpretation and presentation | Desktop and Web based BI tool development | Project Management | Web scraping

WORK SAMPLE

Profile LinkedIn Page: linkedin.com/company/i4data
YouTube: Demo of personal projects (I4Data) / youtube.com/@hosnahamdieh2813
Web applications: I4Data apps i4data-nlp.streamlit.app , I4Data Email automation app i4data-e.streamlit.app
Desktop applications: Social Topic Modeling GUI, Job finder GUI, IT security GUI (Demo in YouTube)

EMPLOYMENT HISTORY

Senior Data Scientist

I4Data (Personal Space), Ottawa, Canada [Sep 2020 – April 2023]
As a Senior Data Scientist, I have spearheaded multiple game-changing projects that have transformed the landscape of data exploration and analysis. My expertise in developing cutting-edge web and desktop applications that solve complex real-world problems is unmatched, and my knowledge in ML, NLP, and other data-related fields has allowed me to share valuable insights and educate others through informative articles on I4Data's LinkedIn page.

- Designed and developed web-based applications that caters to different data analysis use cases, such as text summarization, text matching, topic modeling, multi-factorial prediction, optimization, text reading, email automation. Models like GPT, BERT, T4, and … are being use and comparable in some of the applications.
- Created several desktop applications that have proven invaluable in tackling specific use cases, such as Social Topic Modeling GUI, Job finder GUI, and IT security GUI.

Senior Machin Learning Engineer

Talent, Montreal, Canada [Dec 2022 – March 2023]
As a Senior Machine Learning Engineer, I led efforts to improve search result accuracy using NLP models such as BERT and GPT, achieving a 40% increase in performance, from 50% to 90%. I also designed and developed a new process to find more relevant matches using occupational sources (NOC/CNP, ONET, ESCO.

- Designed, built, evaluated, and deployed robust, scalable, and production-ready ML models Using AWS.
- Applied engineering best practices for Test Driven Development, integration testing, version control, Continuous Integration, and deployment while documenting model reviews, testing and evaluation.

Data Scientist / Data Engineer

Airudi Inc, Montreal, Canada [Oct 2021 – Dec 2022]
I have Improved recommendation system with a new process (increasing accuracy from 30% to 80%), automated data pipelines (ETL) in multiple projects, developed interactive model testing interface, and created a text parser.

- Created a text parser to extract features from plain text using NLP-based models (BERT, Word2Vec, …), to improv flexibility and accuracy of predictions and recommendations.
- Designed and developed a new process for the recommendation system, improving it by 50%, adding multi layers to filter, score, and rank, to select, using the extracted features resulted from the parser.
- Automated data pipeline (ETL) in over 5 projects on Azure Virtual Machines with logging system
- Structured cloud-based databases to store both the raw (extracted) and processed data, accessible to web services (via API) and ML models.
- Developed an interactive model testing interface (BI) to test and fine-tune the process (feature engineering) while generating automatic reports on model's performance.

Information Security Analyst

ITS department, Carleton University, Ottawa, Canada [Sep 2020 – May 2021]

As an Information security analyst, my experience encompasses designing and developing desktop applications for the IT security team, system security monitoring and analysis, website design with a focus on CompTIA Security concepts, exploration of the Elastic cloud, and system security assessment and documentation.

- Monitored and automated the scanning systems on servers to send emails if there were security incidents, optimizing the reporting systems while shutting dawn suspicious accesses.
- Collaboration with cross-functional teams (communication and data governance groups) for AI projects design and implementation, increasing the cyber security by raising awareness and sharing best practices.

Team lead / Data Scientist

Shirin Institute [Mar 2017 – Dec 2019]

As a team lead / Data scientist I have design and development solutions from concept to completion, solving costumer's real problems, increasing customer satisfaction by 30%.

- Supervised the process of data extraction, preprocessing, analysis, visualization, interpretation and visualization of data to prepare actionable guidelines for managers while optimizing processes.
- Taken the lead on market research and risk analysis to prepare communicational plans taking contingency plans in mind, making sure the Client expectation was managed.
- Applied supervised ML models on numerical data, understanding and predicting trends for feasibility studies while Administrating Model tuning and feature engineering.

Project Manager / Business analyst

FajrETosea [Sep 2015 – Mar 2017]

As a project manager / business analyst, I was actively involved in project selection (feasibility study), project strategic planning (work breakdown structure risk analysis, contingency planning, and scheduling), project cost and time management (monitoring, cause and effect analysis, change management, while managing the customer's expectations. I have managed to improve processes and communications, reducing cost by 2%.

- Restructured the project documentation and automated report generation.
- Presented in the stakeholder's meetings, keeping them up to date while managing their expectations.
- Collaborating with cross-functional teams, to deliver the results and integrate the part of the project into one well performing product.

Data Analyst

Shirin Institute [Mar 2013 – Sep 2015]

As a data analyst, I was involved in several projects from start to the end, delivering reports to best guild the decision makers in the competitive market. I have been an active part of the data team working on extracting, preprocessing, processing and presenting the results in form of reports or articles. Our team was working with educational sectors wanting to learn more about the needs and opportunities in the market to make decisions.

Voluntary Projects

Technical Volunteer (**BCSF**) [July-Sep 2021] / Data Analysis instructor (**Shirin Institute**) [2016 –2020]

EDUCATION

Master of Applied Business Analytics, Carleton University, Ottawa, ON [Jan 2020 – May 2021]

Project: Automated social topic modelling process by developing an all-in-one BI tool using Python and NLP concepts to extract insight from social data. The developed desktop app can do everything from data extraction, preprocessing and model comparison to report generation.

Master of Industrial Engineering, Sharif University, Tehran, Iran [Feb 2011 – Jan 2013]

Thesis: Designed and developed a Project selection method for portfolios to optimize profit using Operational Research (OR: Integer programing/IP)

Bachelor of Mining Engineering, Tehran University, Tehran, Iran [Sep 2005 – Aug 2010]

Final project: Market research, feasibility study, applied supervised ML models on numerical data to predict future trends and opportunities.

CERTIFICATES

C++, Machine Learning (ML), Git, Data Scientist, Python, Cyber Security, Data manipulation, Data analysis with Pandas, Data Visualization with Python, BI dashboards with Tableau, Web Scrapping, Differential Calculus, SQL, Text Generation, Language Parsing, Text preprocessing, NLP with Python, NLP , Regular Expression, WES