Shubham Gupta
Mobile: +61 0452659312 | **Email:** iamsg08@gmail.com

Summary: Highly analytical and process-oriented analyst with in-depth knowledge of database types, research methodologies, and big data capture, curation, manipulation and visualization, analytics, and business intelligence used to advance opportunity identification, process reengineering, and corporate growth. Strong technical skills in Python, Machine Learning, and NLP, and a solid academic background in Mathematics and Statistics. Have experience with cloud-based technologies like Databricks, Microsoft Azure. Work with the lead architects and product owners to develop assessments and project plans. Represent the organization in client meetings, document meeting outcomes, and coordinate all external follow-ups to close issues in support of the project requirements.

Areas of Expertise: Machine Learning | Raw Data Sources | Computer Vision | Artificial Intelligence | Data Visualizations | Statistical Data Analysis | Big Data | Predictive Modelling | Collaborative Partnerships

Education: Master of Data Science (GPA 6.467/7) | The University of Adelaide, South Australia, 2019 – 2021 - Research into "Generative Adversarial Networks" in parallel with coursework studies. Also researched "Incorporating Linguistic Knowledge for Abstractive Multi-document Summarization" under The University of Adelaide Summer Research Scholarship. Adelaide Graduate Award recipient.

Certifications
- Microsoft Power BI Desktop for Business Intelligence
- Pytorch Essential Training: Deep Learning
- Excel: Data Analysis | National Association of State Boards of Accountancy (NASBA)
- Python Specialization | University of Michigan (Coursera)
- Usable Security | University of Maryland, College Park (Coursera)

Technical Skills: Machine Learning, Computer Vision, Pytorch, NLP, Databricks, Apache Spark, Pyspark, Microsoft Azure, Python, Pandas, NumPy, Scikit-Learn.

Experience

Data Scientist | InsightFactory.ai, South Australia | Since 07/2021 | Skills: Azure Databricks, Pyspark, Python
- Work with the ML Ops team in the development and production of machine learning models. Providing end-to-end machine learning solutions to clients using Azure Databricks. My responsibilities include Feature Engineering, model preparation in development stage to deploying the models to production.
- Responsibilities also include monitoring model's life cycle by analyzing model drift over a period. Manipulating data sets and building statistical models. Mine and analyze data from company databases to drive optimization and improvement of product development, marketing techniques and business strategies.
- Coordinate with different functional teams to implement models and monitor outcomes. Develop processes and tools to monitor and analyze model performance and data accuracy. Using statistical computer languages to manipulate data and draw insights from large data sets. Working with and creating data architectures.
- Knowledge of a variety of machine learning techniques and the real-world advantages/drawbacks. Advanced statistical techniques and concepts (regression, properties of distributions, statistical tests, and proper usage) and experience with applications. Dashboard development and generation for daily and all reporting needs.
- Assess the effectiveness and accuracy of new data sources and data gathering techniques. Enhance data collection procedures to include information that is relevant for building analytic systems. Select features and optimize classifiers using ML techniques. Perform ad-hoc analysis and present results in a clear manner.
- Develop automated processes and tools to monitor and analyse model performance and data accuracy. Leverage big data to discover patterns and solve strategic business problems using structured and unstructured data sets across multiple environments. Follow and document best practices and processes.
- Maintain the data landscape and consistently seek opportunities to enhance understanding of customers, market, and product fit, etc. Ensure tracking and reporting enabling the understanding of the business parts like customer acquisition process, cost, and product usage. Provide support and documentation.

Scholarships & Research Projects
Australian Institute of Machine Learning (AIML), The University of Adelaide,
Research Project – "From Text to Image: Generating Images of Animals", 07/2020 – 06/2021
Focus on generative process of foreground objects such as animals in a scene. Apply CNN models, including GAN's (Generative Adversarial Networks), CGANs (Conditional GANs), and StackGans (Stacked GANs) approach to generative modelling using deep learning. Supervisor: Dr. Rafael Felix Alves

- Observed generation of full natural images from textual representation. We were able to preserve the background information that was not achieved by traditional approaches.

Research Assistant – Summer Research Scholarship | The University of Adelaide, South Australia | Research Project – "Incorporating Linguistic Knowledge for Abstractive Multi-document Summarization", 12/2020 – 05/2021

- Selected for Summer Research Scholarship at the University of Adelaide. Worked under the supervision of Dr Wei Emma Zhang for the research project "Incorporating Linguistic Knowledge for Abstractive Multi-document Summarization". Corresponding author in final paper (in submission).
- **Publications:** Ma, C., Zhang, W.E., Wang, H., Gupta, S. and Guo, M., 2021. Incorporating Linguistic Knowledge for Abstractive Multi-document Summarization. arXiv preprint arXiv:2109.11199.

Research Project – "Most in-demand programming language in Australia", 02/2020 – 06/2020
Developed python code to scrape job descriptions from Seek under software development category. Applied Natural Language Processing techniques to find programming language mentions in job description. Conducted programming skill mapping required of respective job listings as well as expected salary | Supervisor: Dr Christoph Treude
Key Accomplishments: Received a distinction for identifying most in-demand programming language in Australia.

Teaching Assistant | The University of Adelaide | 03/2021 – Present
Courses – Computer Vision, MATLAB and C, Introduction to Software Engineering, Distributed Databases & Data Mining, Object Oriented Programming, Algorithm & Data Structure Analysis.

- Delivered workshops, practical's outlining background information and core concepts with other teaching assistants.
- Discussion board, grading student's assignments on time and providing valuable comments to students.

Professional Membership

- Australian Computer Society (ACS), Adelaide AU Associate Member – 4307155, 10/2021 – Present
- Association of Computing Machinery (ACM), New York USA Associate Member – 8484526, 10/2021 – Present
- International Association of Engineers (IAENG), China Associate Member – 296034, 10/2021 – Present

Casual Employment - Event Day Bar & Wait Attendant | Adelaide OVAL, Adelaide | 11/2019 – 03/2021

- Worked as a Hospitality attendant at the Adelaide Oval. Assisted with serving around 400-500 people on a given event day in Function Rooms. Worked in Corporate Suites. Included 4 course meals and drinks. Have bartending experience. High tip average because of higher customer satisfaction.

Professional Training

- Service of Alcohol (RSA), South Australia, 09/2019 National Provider Code: 40592, Document No: OL1654361
- Basic Food Handling, South Australia, 10/2019 Statement Number: 5626

Volunteering

- Kitchen Assistant | Meals on Wheels, Burnside, Adelaide 5066 Australia 06/2022 – Current

Accomplishments: Adelaide Graduate Award Recipient (05/2021) | Research Scholarship – University of Adelaide (12/2020)

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