ABDULLAH REZA

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Data driven generalised specialist with two years of progressive experience in product development, agile project management, IoT and applied machine learning. Experienced in SQL and NoSQL for architecting database while proficient in Python, R, Matlab, Apache Spark, Tensorflow, Keras and DL4J for data mining, modelling and solution deployment. Additional two years of experience in market research resulting in initiating and executing the pivoting of the organization.

Core Competencies

- Problem Solving
- Leadership
- Conflict Management
- Design Thinking
- Strategic Planning
- Lean Six Sigma
- Agile Project Management
- Research & Development

Experience

Project Engineer **March, 2017 - Present**
Plus Solar Systems Sdn. Bhd., Kuala Lumpur, Malaysia

Recruited to explore the feasibility of developing industrial IoT solution for energy monitoring. The scope was identified by mapping customer's journey, and framework centred on agile principles were implemented to propel technical development.

- **Reduced time-to-market:** Envisioned and led the development of IoT solution by leveraging open source resources which reduced time-to-market from 12 months to 3 months.
- **AI for building systems:** Architecting the development and deployment of artificial intelligence (Deep-Q learning) in building systems to reduce energy consumption by 15%. ML Pipelines were implemented to automate the tasks of ETL, model generation and validation.
- **Defined goals and requirements:** Collaborated with customers, operations manager and company stakeholders to align goals, define scope of the project and set technical requirements.
- **Employed agile methodologies:** Orchestrated a framework to employ agile practices in the solution development process and integrated it with the existing process model to deliver continuous improvement.
- **Facilitated the creation of new business unit:** Liaised with management to expedite the creation of new business unit focused on creating value and assisted them with strategic planning for R&D operations.
- **Mentored team members:** Coached and mentored new recruits to adopt design thinking mindset and launched company wide campaign on digital transformation awareness.

Sales Executive **Nov, 2012 - Feb, 2015**
Power Matrix Ltd., Bangladesh

Responsible for propelling business development through collaboration with real estate companies. Progressively the role expanded to liaise with regulatory authorities, utility companies and to conduct market research to identify new revenue stream.

- **Improved operation and removed impediments:** Facilitated collaboration between sales and engineering operations by providing autonomy to team members to effectively carry out delegated responsibilities.
- **Conducted market research:** Analysed renewable energy policy and conduct market research to identify new revenue stream and initiated collaboration with utility companies to boost annual revenue by 7%.
- **Propelled organizational change:** Orchestrated successful pivoting of the organization by formulating transparent process and liaised with senior leaders and junior executives to drive organizational change.

Research Assistant **Jan, 2009 - Jan, 2010**
National Institute for Aviation Research (NIAR), USA

Joined computational mechanics lab as an undergraduate research assistant to conduct computer aided simulation, statistical engineering

- **Automated data preprocessing and postprocessing:** Facilitated statistical engineering process and benchmarking by automating tasks in Excel (VBA macros) which improved overall process completion time by 25%.
- **Collaborated with senior researchers and FAA:** Assisted senior researchers and prepared test equipment to perform destructive testing as per guidelines of Federal Aviation Authority (FAA) to determine crash worthiness.

Education

Bachelor of Mechanical Engineering **2015 - 2019**
Infrastructure University Kuala Lumpur **CPGA: 3.628 / 4.00**

- Dean's List (2015 - 2018)
- Head of Clubs and Societies Bureau, Student Representative Council

Skills

- **Programming Language:** C/C++, Matlab, Fortran, Javascript, Java, NodeJS, Python, R, HTML, CSS, Scala
- **Machine Learning Framework:** Tensorflow, Keras, OpenCV, Scikit-Learn, Apache Spark, SystemML, DL4J, PyTorch, Darknet (C++ Framework)
- **Database:** SQL, NoSQL
- **Business Intelligence & Data Visualization:** Tableau, D3.js
- **Dev Tools:** Git, Flask, Docker, Kubernetes
- **Cloud Platform:** AWS, Google Cloud Platform, IBM Bluemix
- **Computer Aided Design:** Solidworks, AutoCAD, CATIA
- **Computer Aided Engineering:** ANSYS, LS-DYNA, Altair Hyperworks
- **Language:** English, Bangla, Hindi, German

Certificates

- Fundamentals of Scalable Data Science by IBM
- Advanced Machine Learning and Signal Processing by IBM
- Applied AI with Deep Learning by IBM
- Lean Six Sigma Green Belt by GreyCampus
- Embedded System by University of Texas Austin

Projects

- **Collect and analyse device sensor data to examine oil and gas pipelines for defects and take corrective or preventive action automatically**

  Machine learning classification techniques were implemented to reduce time consuming equipment inspection in widely distributed industry, specifically oil and gas. By deploying Visual Recognition algorithms, images were analysed against a trained classifier to inspect oil and gas pipelines with six identifiers: Normal, Burst, Corrosion, Damaged Coating, Joint Failure and Leak.

- **Monitor electrical load, track and detect maximum demand of an industrial plant**

  NodeJS based IoT solution was developed to integrate low cost hardwares with industrial automation protocols such Modbus and PLC. The solution can take measurable actions to reduce operational expenses without altering pre existing SCADA architecture; enabling processes to be lean and agile without the overhead cost of compliance and regulations. The project was envisioned during my internship at Plus Solar and the success of the project led to the creation of new business unit that focuses on value creation.

  The life-cycle of the IoT solution were developed (architecting the process and data model) and managed (prototype to production) on Google Cloud Platform. Machine Learning pipelines were implemented to automate the workflow of Data Warehousing, Model generation and deployment. Various ML/Statistical algorithms (Generalised Linear Model, Ensemble Learning and Support Vector Regression) were implemented to determine optimum outcome.

  Github: https://github.com/rezaabdullah/Zero-Export-Solar