

Mark Dodd

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DATA SCIENTIST

Passionate about leveraging machine learning and programming to solve real world business problems.

Analytical and solution-driven Data Scientist with over 17 years' success directing automation programming and large-scale projects for oil and gas industry clients. History of leveraging data analytics to solve complex operational problems, identify improvement opportunities, and expedite/streamline work flows. Proficiency in extracting value from data, creating HMI (human machine interfaces), and resolving chronic business challenges. Expertise in project management with solid skills in requirement gathering, translating client needs, and devising plans/programs to achieve goals.

Data Science (Python, R, SQL, MySQL) • Data Cleaning (pandas, NumPy) • Machine Learning (scikit-learn, Keras, TensorFlow)
Data Visualization (matplotlib, seaborn, plotly, ggplot2, Tableau) • Data Mining (SQL, API's, XML, JSON, CSV, Beautiful Soup, regex) Software Development (Python, SQL, C#, PLC, HMI) • Uncovering Key Insights & Business Value • Project Management
Team Collaboration & Leadership • Problem Solving & Analysis • Process Improvements & Efficiencies

EDUCATION & CREDENTIALS

Post-Baccalaureate Diploma, Data Science & Analytics – University of Calgary (*Graduation: April 2020*)

Completed Courses: Statistics, Visualization, Big Data (SQL, Spark), Regression Analysis, Machine Learning (sklearn, TensorFlow)

Completed Group-Based Projects:

- ❖ Computer Vision – Created a convolutional neural network (CNN) utilizing TensorFlow / Keras on Google Cloud
- ❖ Housing Price Prediction – Linear & Elasticnet Regression Analysis, SVM, 80+ features (feature engineering)
- ❖ Hadoop & MapReduce Paradigm Presentation (Big Data) – Delivered 30-minute Class Presentation/Instruction.
 - ❖ NHL Game Prediction Model Development (Statistics) – Leveraged NHL Data and Logistic Regression.
- ❖ NHL Data Exploration & Analytics (Programming) - Created interactive heat map for all shots on goal and goals scored for the 2018 season – 300,000 events); created a bootstrap game simulations based on past performance.

Data Science with Python Track – Data Camp

Bachelor of Science, Electrical Engineering – University of Alberta

PROFESSIONAL EXPERIENCE

Duco Design

2015 – Present

ELECTRICAL & AUTOMATION ENGINEER (CONTRACT)

Engaged to manage automation projects, including assisting with procurement, building automation programs, and directing program commissioning/installation at facilities. Gathered business requirements from clients and partner engineering firms, translated requirements into program design documents, captured system functionality, and programmed automation systems. Created custom visualizations for time series data for industrial operations.

- ❖ Served as Control System Engineer and leader on various projects (oil and gas industries) valued at up to \$2M.
- ❖ Designed and built a C# utility to write an XML framework for PLC program – reduced implementation time.
- ❖ Rewrote a large PLC program using Python (Beautiful Soup and Regex); enabled program maintenance and introduced reliability and stability. Avoided retesting entire plant and gained trust/buy-in from client.

Norma Engineering

2014

ELECTRICAL & AUTOMATION ENGINEER (CONTRACT)

Served as client consultant; scoped project requirements and created formal design requirements/design drawings.

Schneider Electric Canada (formerly Kilowatts Design)

2002 – 2014

ELECTRICAL & AUTOMATION ENGINEER (FULL TIME & CONTRACT ENGAGEMENTS)

Delivered client engagements; designed control infrastructure for oil and gas clients. Directed project teams, provided on-site oversight, and drove commissioning and installation of programs. Instrumental in product development, quality assurance, and client project delivery. Handled projects valued at up to \$60M. Mentored junior engineers.

- ❖ Led implementation of a large control system for a \$450M gas plant; led a team of six automation engineers; navigated extensive client requirements.
- ❖ Spearheaded development of a customized compressor control program – expanding sales opportunities.
- ❖ Assigned to project for ATCO Power Ltd.– rehabilitated at-risk, late-stage project to achieve critical deadlines (remote facility accessible only by ice road – needed to transport equipment before road thawed). Subsequently engaged to oversee design engineering, plant programming and commissioning.