JEFFERY A. BROWN

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DATA SCIENTIST
Leadership | Machine Learning | Data Analytics and Visualization | Agile / Lean | Results

PROFESSIONAL SUMMARY

Engineer and technical leader with 15+ years of experience in the Telecom industry now ready to increase the effectiveness of Northrop Grumman operations as a Data Scientist through data exploration, application of artificial intelligence, and partnership with technical and business decision-makers to deliver business solutions.

- Developed **Python** software and supporting **Postgres SQL database** to extract information from web resources and store up to 10M records of correlated social media trend information for a **full-stack interactive dashboard**. Created a Python backend interface with 20 web routes, and selected visualizations using JavaScript.
- Applied **Artificial Intelligence** to classification of 3662 retinal images for stages of diabetic retinopathy, a disease which can lead to blindness in conjunction with Kaggle.com competition "APTOS 2019 Blindness Detection".
- **Reduced data preparation time by 50%** by developing **Excel Visual Basic for Applications** code and **Power BI** visualizations to facilitate management and tracking of test progress and status.

SKILLS

Exploration of Data Sets | Data Analysis and Visualization | Machine Learning Models | Artificial Intelligence | Neural Network Models | Statistics and Statistical Analysis | Mathematics | Software Engineering | Product Development | Software Development Life Cycle | Agile / Lean Project Management | Certified Scaled Agile Framework (SAFe) | Client and Vendor Management | Leadership, Coaching, Mentoring, Teaching | Quantitative Analysis | Problem Solving

TECHNICAL PROFICIENCIES

Languages, Operating Systems, Development Tools: Python, Visual Basic for Applications (VBA), JavaScript, HTML, CSS, C, C++, UNIX, Linux, Windows, Unix Shell, Bash, Git, Visual Studio

Artificial Intelligence: Machine Learning, Algorithms, Models, Logistic Regression, Linear Regression, Random Forests, Hyper-Parameter Tuning, Deep Learning, Neural Networks, Keras, Big Data, Large Data Sets, PySpark

Databases: SQL, Postgres, MySQL, SQLite, Microsoft Access, NoSQL, MongoDB

Other Data Science or Software Tools, Resources: Tableau, Power BI, Python, Pandas, Excel Visual Basic for Applications (VBA), R, Extract/Transform/Load (ETL), Web Scraping, APIs (Flask, JSON), Visualization (D3, Leaflet, Bootstrap)

PROFESSIONAL DEVELOPMENT

Northwestern University - Chicago, Illinois
Completed **Certificate in Data Science**: Intensive 24-week Data Science Boot Camp providing hands-on learning, with application of data exploration, analysis, and visualization tools and techniques to real-world analytical challenges

Coursera.org
Currently enrolled in **Deep Learning Specialization**: Neural Networks and Deep Learning; Improving Deep Neural Networks: Hyperparameter Tuning, Regularization and Optimization; Structuring Machine Learning Projects; Convolutional Neural Networks; Sequence Models

DATA SCIENCE & ANALYTICS PROJECTS

GeoTweet – Python, PostgreSQL, ETL, Flask, Heroku, JavaScript/D3 | [GitHub](#) | [Visualization](#) (Heroku)
Developed full-stack interactive dashboard of Twitter Trends to aid political analysis.
- Partnered with a small team to develop a full-stack interactive dashboard of social media trends using Python, Pandas, Flask, Postgres, SQLAlchemy, JavaScript, D3, and deployed as a web application via Heroku.
- Developed Python software and supporting SQL database (Postgres) to extract information from web resources and store up to 10M records of correlated social media trend information. Used Python (Pandas, Flask) create a backend application interface with 20 web routes, then designed and implemented selected frontend visualizations using JavaScript, D3, and Plotly.

Diabetic Retinopathy – Kaggle, Python, Keras, Image Classification | [GitHub](#) | [Report/Analysis](#) (Jupyter Notebook)
Used Artificial Intelligence to classification of retinal images for stages of diabetic retinopathy, a disease which can lead to blindness.
- Used Keras ImageDataGenerator and 3662 retinal images for training, validation, and evaluation of Convolutional Neural Network models for image classification
- Analysis performed in conjunction with Kaggle.com competition "APTOS 2019 Blindness Detection"

CitiBike – Python, Tableau | [GitHub](#) | [Visualization](#) (Tableau)
Analysis and visualization of CitiBike usage in the Jersey City Area.
- Worked independently to explore and analyze CitiBike usage and summarize key findings.
- Used Python (Pandas) to explore CitiBike datasets and prepare them for analysis. Used Tableau to analyze the data and create reports and dashboards. Published summary on Tableau Public.

PROFESSIONAL EXPERIENCE

Nokia – Naperville, Illinois   01/2004 to 09/2019
Release Leader   05/2016 – 09/2019
Partnered with cross-functional business stakeholders to lead customer-specific end-to-end validation testing for 4G and 5G releases.
- Led end-to-end validation testing efforts for over 6 releases, engaging 150+ stakeholders each release to complete testing focused on the configurations, scenarios, and performance metrics used by our customers.
- Reduced data preparation time 80+% by developing Excel Visual Basic for Applications code and Power BI visualizations to facilitate management and tracking of test progress and status.
- Drove savings of $900K and improved effectiveness, processes, quality, and employee satisfaction by engaging 200+ project members to brainstorm 40+ "pain points" and ideas for Lean initiatives.
- Empowered 80+ people on 4 teams to discuss corporate employee engagement survey results and develop action plans for each of 2 years, improving teamwork and alignment.
- Promoted collaboration using Microsoft SharePoint, OneNote, and other resources, including development and delivery of webcasts / in-class tutorials to 120+ colleagues/employees.

Capacity, Performance, and Resiliency Test Manager   10/2011 – 05/2016
Built and guided teams of engineering professionals to evaluate LTE network performance using state-of-the-art tools and techniques. Drove product changes to improve quality. Collaborated with customers (leading wireless service providers) to ensure world-class performance.
- Transformed customer dissatisfaction into an improved customer relationship through implementation of Lean methods in resiliency testing, improving responsiveness by 50+%.
- Improved tool integration team responsiveness and satisfaction of 50+ call load testers through implementation of Lean methods in third-party tools integration and support.
- Provided insights on the linkages between performance testing results and quality delivered to customers through refinements in monthly dashboard report to business leadership.

Wireless Platforms and RAN Test Manager   01/2004 – 09/2011
Ensured wireless network SW/HW platform systems and LTE Radio Access Network products met the demanding expectations of client base. Worked with global development teams and third-party vendors both directly and as manager of technical professionals.
- Improved test automation team responsiveness and satisfaction of 30+ users through Agile best practices, providing a consolidated view of customer needs, backlog, and tasks managed through an easy-to-use tool.
- Received the Alcatel-Lucent 2014 Award of Excellence and Innovation for continuing efforts to improve individual and organizational effectiveness using technology.

OTHER EXPERIENCE
College of DuPage – Glen Ellyn, Illinois   09/2017 to Present
Adjunct Faculty, Continuing Education   09/2017 to Present
Expanded the knowledge of 70+ continuing education students by occasionally teaching computer classes, including Microsoft Office applications (Excel, PowerPoint, Word, Access, Outlook, and OneNote).

EDUCATION
Illinois Institute of Technology, Stuart School of Business, Chicago, Illinois
Master of Business Administration (MBA)

Rensselaer Polytechnic Institute, Troy, New York
Master of Science in Electrical Engineering (MSEE)

The Ohio State University, Columbus, Ohio
Bachelor of Science in Electrical Engineering (BSEE)