BRANDON O'BRIANT

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PROFILE

Data Scientist and Engineer with a strong data and telecommunications background, 5+ years of experience in **SQL**, **R**, and **Python**, along with experience in machine learning, deep learning, network programmability, and solid skills in strategic planning. Passionate about data science, collaboration systems, satellite communication networks, optimization, modeling and simulation, and explaining complex subject matters to non-technical business audiences. Developed solid skills to provide reports, analyze data, manage records, and coordinate with a variety of teams in fast paced environments. Committed to the highest quality and research accuracy and building productive relationships with all stakeholders and organizes timelines and methodologies to achieve common goals.

TECHNICAL SKILLS

Software, Programming Languages, Technologies: Python, C++, R, Spark, Tableau, SQL, PostgreSQL, JavaScript, Git, Unix, Linux, LaTeX, Windows

Network Protocols and Technologies: Routing, Switching, SD-WAN, BGP, EIGRP, QoS, Cisco Unified Communications, Cisco Unified Call Manager, Cisco Unity Connection, Cisco Telepresence, Cisco Real Time Monitoring Tool, Cisco Switchs, Cisco Routers, Cisco Voice Gateways, Cisco ISR 4331, iDirect Modems (X5, X7, iQ200), Ericsson Mini-Link Long Haul Radio, , iDirect iVantage Satellite Communication Suite, Ericsson Mini-Link Craft, Enterprise Capacity Manager (ECM)

Machine Learning and Statistical Methods: classification, generalized linear models, Markov models, metaheuristic algorithms, non-linear optimization, stochastic optimization, exploratory data analysis (numerical and visual), predictive modeling, neural networks, natural language processing, deep learning, and logistic regression

Selected Coursework: Introduction to Telecommunications, Routing and Switching (Cisco focus), Probability/Statistical Theory, Business Finance, Linear Algebra (Theory/Applied), Differential Equations, Project Management, Technical Writing, Mathematics of Risk, Decision Analytics (Python, Gurobi, Excel ASPE), Practical Machine Learning (Python), Regression and Multivariate Analysis (Python), Statistical Analysis (R), Database System and Data Preparation (Python, PostgreSQL), Computational Science Modeling and Simulation (Python), Data and Text Analytics (Python)

EDUCATION

Colorado State University, Ft. Collins, CO — **January 2020 – May 2021**
Master of Science in Systems Engineering — (Online)

Southern Methodist University, Dallas, TX — **January 2019 – November 2019**
Master of Science in Electrical Engineering, GPA 4.0

Northwestern University, Evanston, IL — **March 2017 - August 2018**
Master of Science in Data Science, GPA 3.75 — (Graduated)

Pacific Lutheran University, Tacoma, WA — **September 2014 - December 2016**
Bachelor of Science in Mathematics, GPA 3.09 — (Graduated)

Pierce College Ft. Steilacoom, Lakewood, WA — **September 2012 – August 2014**
Associates of Arts Mathematics Focus, GPA 3.56 — (Graduated)

ACADEMIC HONORS AND AWARDS

Natural Science Outstanding Student for Mathematics — **2013-2014**
Pierce College Ft. Steilacoom, Lakewood, WA

PROFESSIONAL EXPERIENCE

ASSOCIATE ENGINEER, RF — June 2019 – Present

Transport Engineering | Satellite and Microwave RF
General Communications Inc.
Anchorage, AK

- Deltanet SONET to IP Modernization Project | Microwave Ring in the TERRA Network:
    - Developed Python program to mine specific data from a directory of log file based on specific substring from user input. Data obtained is then saved to a separate text file with section headers, thus reducing the time required to collect and consolidate specifc log data.
    - Assist in the development of installation packages to include statements of work, power calculations, materials lists, MOPs, network configurations, and track project documentation.
    - Build detailed models of racks and RF radio equipment in MetaSolv to maintain organization-wide network system inventory and configurations.
    - Participate in daily status update meetings and activities, including technical support in installation of RF equipment, radio configurations, and turn-ups to ensure RF systems are installed and function according to specification.
- iDirect SIOP:
    - Configured iDirect modems and lead the turnup for Artic Village working closely with project mangers, ROPS, stie agents, and other RF engineers.
    - Currently, configuring the outstanding 200 iDirect iQ200 modems for the upcoming turnups.
- Configured routing and assisted with re-imaging for a new iDirect satellite communications system management server.
- Restructured, documented, and developed standards to improve efficiency and documentation integrity. Developed a Python script to migrate data from the old structure to new network drive structure.
- Performed data acquisition and validation for FCC regarding transmission rates and site locations.
- Mined network data rates and utilization and presented the data in a clear and easy to utilize format to assist management with COGS reporting.

TELECOMMUNICATIONS ANALYST — October 2018 – June 2019

Costco Wholesale Corporation
Issaquah, WA

- Responsible for daily troubleshooting, support and maintenance of network Voice infrastructure, with emphasis on Cisco voice platforms, including both remote and hands-on support of other groups, vendors, customers, and monitoring CARTS.
- During a Century Link to Level3 porting project, lead initiative to automate process that includes sending test faxes to departments at each warehouse through Efax utilization, Python scripting for automating logging into each analog gateway device to enable T.38 fax protocol, and bulk upload (BAT) changes to route groups, calling search spaces, and enable T.38 fax protocol in Cisco Unified Call Manager. Completing the project before deadline and underbudget saving Costco $85,000.
- Assist other Analysts and Management with developing long term, enterprise level planning around standards, and process.
- Streamlined the warehouse building/configuration process reducing long term analyst engagement allowing for other projects to be addressed.
- Assist with setting up the non-production lab for warehouse division.
- Working with multiple departments and telecom analyst to setup the first SD-WAN implementation for Costco.

INFORMATION SECURITY SPECIALIST — June 2018 – October 2018

Costco Wholesale Corporation

Issaquah, WA

- Prepared files, monitored, maintained and documented all necessary paperwork to support the analyst throughout the assessment lifecycle.
- Adhered to established policies, standards, processes, and procedures to ensure productivity, quality, and efficiency, resulting in enhanced customer satisfaction.

SYSTEM ADMINISTRATOR **April 2018 – June 2018**

TrueBlue Inc.
Tacoma, WA

- Initiated and completed manual and automated data and settings migration, and drive mapping and application installation using technologies such as Remote Anywhere, WebEx, and VPN for large scale migration project.
- Completed Citrix Thin Client URL changes utilizing VNC, Angry IP Scanner and with RDP.
- Assisted project manager in scheduling migration appointments and Citrix URL updates with technicians.

COMMERCIAL DIVER/RIGGER/ASSISTANT LIFE SUPPORT TECHNICIAN (IMCA) **December 2010 – July 2012**

Global Industries L.L.C.
Carlyss, LA

- Established efficient communication with divers, Senior Life Support Technician, and diving Supervisors to contribute actively to exemplary quality of care and coordination as a member of interdisciplinary team.
- Worked with Saturation Engineering Technicians to break down, repair, and retrofit a new saturation diving system.
- Lead and orchestrated diver operations support through mixed gas inventory, equipment testing and maintenance, pressing/decompression of saturation divers, ensuring project completion in a safe manner in adverse conditions.

FIBER OPTICS AND DATA TELECOMMUNICATIONS TECHNICIAN **August 2005 – January 2006**

TEKsystems
Longview, WA

- As a crew lead for a new Lowes construction project, involved with data, video, telephone, and security systems cabling, ensured a professional and safe work environment while completing the project ahead of schedule and underbudget.

FIBER OPTICS AND DATA TELECOMMUNICATIONS TECHNICIAN **October 2004 – December 2004**

Impact Solutions LLC
Bangor Nuclear Submarine Base, WA

- Removed out-of-date telecom and information cabling systems.
- Installed fiber optics and CAT5 data cabling.

FIBER OPTICS AND DATA TELECOMMUNICATIONS TECHNICIAN **May 2004 – October 2004**

Impact Solutions LLC
San Marcos, CA

- Worked in a fast-paced independent environment to prewire with data, cabling, theater, telephone, and security systems in newly constructed townhouses.
- Trained new employees on procedures and operations of installment.

LANCE CORPORAL | INFANTRY **July 2003 – May 2004**

United States Marine Corps (Honorable Discharge)
San Diego, CA

- Implemented detailed plans to ensure subordinates would meet and exceed deadlines for supply, ceremonial, night watch, and weekly barrack/uniform inspections.

- Maintained professional etiquette during civilian and military installations related to supplies, warehousing, and transportation. Recorded visits and performed quarter deck watch.

TELECOM/NETWORKING PROJECTS

- **Home lab** Stood up and configured a home lab for certification, professional, and academic research purposes in the network and telecommunications space. Utilizing OVA's from Cisco installed VMs for Cisco Unified Call Manger 12.0 (CUCM Publisher, Subscriber, IM and Presence, Unity Connection), and Cisco VCS 8.9 Video Server. Hardware for the lab consists of:
    - Meraki Devices: AP, Security Device, SD-WAN Switch, Software Manager (20 devices)
    - Cisco Routers: 2911 Voice-Security k9 Licences, 2 x 2811 CME 8.6 CCP 2.7
    - Cisco Switch: 3560-PS PoE Switch, 3750v2 PoE
    - Dell r610 Server: VMware Esxi 6.0, Windows 12.0 Server

DATA SCIENCE PROJECTS – (NORTHWESTERN UNIVERSITY)

- **Master's Capstone**: Working with a team of four, developed a R-Shiny web-based application dashboard of the current global impact of Zika and models the infection rates of hypothetical Zika outbreaks of various localities inside the continental United States.

- As a developer on a team of four, I participated in constructing interpretable and appealing interactive visualization comparing NSRDB and SURFRAD solar radiation levels providing. Electron (application framework), JavaScript, D3.js, HTML, and CSS.

- Lead Python developer and researcher for a group of three for comparing optimization techniques for regression models to predict corn yields. A genetic algorithm, in R, was used to obtain features for the regression models (Linear, Random Forest, Neural Network, Support Vector Regressor). Regression models were developed in Python, using a 10-KFold cross validation design and manual hyperparameter tuning. The combined R and Python manual method was then compared to an automated optimization tool (TPOT) that uses a genetic algorithm optimization technique to discover the best pipeline (feature selection, model selection, hyperparameters). We concluded that the TPOT outperformed the manual method by a slight margin, but reduced the ability to choose parameters that should be included in the model preferring the manual method when feature importance is difficult to quantify.

- Compared classification methods, logistic regression, Naive Bayes, and support vector machine using a cross-validation design. The average AUROC was used to assess the performance of the model's ability to predict customers that will participate in term deposits. Python (SciKit-Learn, Pandas, Numpy, Matplotlib)

- A 10-KFold cross-validation design, using root mean-squared error (RMSE), was implemented to compare regression methods (linear, ridge, lasso, and elastic net) for assessing the market value of residential real estate to support managerial decision making. Python (SciKit-Learn, Pandas, Numpy, Matplotlib, OS, and Seaborn)

PERSONAL WEB PORTFOLIO, 2017

- HTML, CSS, and JavaScript were used to build personal web portfolio that is hosted through GitHub-Git Pages.

UNDERGRADUATE CAPSTONE, 2016

- Fuzzy Set Theory – Application in Forecasting: Researched Fuzzy Logic/Set theory and formulated a detailed comparative analysis to 'crisp' logic in applications of stock market volatility forecasting using fuzzy c-means clustering algorithm and neural network with backpropagation. (Python, R, and Excel)