William Trevena

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Education

PhD, Industrial and Systems Engineering　　　　　　　　　　University of Florida — May 2024
Advisors: Dr. Xiang Zhong, Dr. Michelle Alvarado

BS/BA, Industrial and Systems Engineering　　　　　　　University of San Diego — May 2020

Professional Experience

HBN | *Founding Board Member & Technical Advisor*　　　　　　　　　**May 2019 — Present**
- Lead an interdisciplinary team specialized in developing full stack mobile and enterprise applications.
- Worked with a lumber distributor (40 stores, $500m/yr. revenue) to build custom enterprise resource planning (ERP) software tools enabling procurement teams to develop demand forecasts and data-driven inventory policies.
- Supporting the development of a mobile application seeking to democratize access to mental health services.

Nike | *Demand and Supply Management Intern*　　　　　　　**May 2019 — August 2019**
- Constructed a forecasting tool to predict demand forecast volatility for a group of user-identified products.
- Collaborated with cross-functional stakeholders to ensure software provided actionable information for end users.
- Led efforts to increase levels of collaboration between the analytics team and operations management.

Solar Turbines & The University of San Diego | *Engineering Team Lead*　　**January 2019 — May 2019**
- Forecasted the necessary inventory ROPs to satisfy consumer demand with a desired fill rate in future months.
- Generated product lead time and consumer demand forecasts using ensemble methods.

Simio Simulation Competition | *Team Technical Lead*　　　　**September 2018 — December 2018**
- Developed a virtual seed production facility simulation using Simio to identify bottlenecks and potential system improvements to maximize efficiency, throughput, and decrease costs by sustainably redesigning production lines.
- Facilitated the development of a diverse group of peers into a motivated and cohesive team built on foundations of respect, trust, integrity, and positivity.
- Awarded honorable mention for "Best Modeling Skills", and placed in the top 3% of over 300 collegiate teams worldwide.

Bob Duffy Associates | *International Regulatory Compliance Research Intern*　　**May 2017 — September 2017**
- Researched and documented solutions for clients navigating international medical device regulatory requirements.

Military Experience

Florida Army National Guard | *Human Resources Officer*　　　　　**June 2020 — Present**
- Actively supporting the combat readiness of battalions across the state of Florida preparing for upcoming deployments.

United States Army ROTC | *Cadet Company Commander*　　　　**September 2015 — May 2020**
- Synchronized, inspired, and transformed a Company of 56 individuals (18-22 yr. old cadets / students) of diverse nationalities, ethnicities, and socio-economic backgrounds into a unified, professional, and cohesive team built on foundations of respect, trust, integrity, and positivity by empowering subordinate leaders, actively emphasizing transformational and servant leadership, and by taking the time to genuinely connect with each member of my team.
- Deployed to Mongolia on a diplomatic & joint operations mission to strengthen relationships with Mongolian leadership.

Army Corps of Engineers | *Project Engineer Intern*　　　　　　**May 2017 — September 2017**
- Represented the Corps of Engineers as a contract and quality assurance administrator during the construction of the 1.1 million sq. ft Ft. Bliss Replacement Hospital to enforce adherence to government contractual standards.
- Mediated conflict and heated contractual disputes through calm and professional communication with contractors.

Technical Skills

Languages:　　　　　　Python, R, MATLAB, React-Native, JavaScript, Cypher, SQL, GraphQL, VTL
Software & Resources: AWS (EC2, Lambda, Amplify, AppSync, Cognito, DynamoDB, S3), DigitalOcean, Neo4j, Simio
Graduate Coursework: Linear Programming & Network Optimization; Global Optimization; High-Dimensional Data Analysis; Applied Probability Methods in Engineering; Stochastic Modeling & Analysis

Publications

- Kim, J. D. and Trevena, W. (2021). Measuring the rebound effect: A case study of residential photovoltaic systems in san diego. *Utilities Policy*, 69:101163
- Ngo, T. T., Hoffman, L., Hoople, G. D., Trevena, W., Shakya, U., and Barr, G. (2020). Surface morphology and drug loading characterization of 3d-printed methacrylate-based polymer facilitated by supercritical carbon dioxide. *The Journal of Supercritical Fluids*, 160:104786