**Alexander Vandenberg**

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**Education**

**IBM Data Analytics Professional Certificate**,by IBM on Coursera *Mar. 2024*

**Courses:** Excel Basics,Data Visualization and Dashboards with Excel and Cognos Analytics, Python for Data Science, Python Project, Databases and SQL for Data Science, Data Analysis with Python, Data Visualization with Python

**Northeastern University**, Boston, MA  *Dec. 2023*

Bachelor of Science in Mechanical Engineering, Minor in Mathematics

**GPA:** 3.92

**Courses:** Matrix Methods for Data Analysis and Machine Learning, Introduction to Programming with Data, Probability and Statistics, Measurement and Analysis, Mechanical Engineering Computation, System Analysis and Control

**Activities:** AerospaceNU Simulation, American Society of Mechanical Engineers, Club Spike Ball, Intramural Softball

**Google Data Analytics Professional Certificate**,by Google on Coursera *Aug. 2022*

**Courses:** Ask Questions to Make Data-Driven Decisions, Prepare Data for Exploration, Process Data from Dirty to Clean, Analyze Data to Answer Questions, Share Data Through the Art of Visualization, Data Analysis with R Programming

**Skills**

* Proficient in Python, SQL, Tableau, Cognos Analytics, Excel, R, HTML, VBA, MATLAB, and C++
* Analytical problem solving, technical presenting, teamwork, time management, and communication

**Work Experience**

**Northeastern University**, Boston, MA *Sep. 2022 – Dec. 2023*

Mechanical Engineering Tutor

* Tutored students in Measurement and Analysis, Fluid Mechanics, Dynamics, Thermodynamics, and Statics
* Boosted a student’s grade in Thermodynamics from F to C
* Offered advice related to finding co-ops, on campus employment, and class registration

**Eemax/Rheem**, Waterbury, CT*Jan. 2022 ­­- Jul. 2022*

Mechanical Engineering Co-op (Innovation, R&D, NPI, QA)

* Performed IP research and contributed to multiple potential patents, including “Insulated Tank with Diaphragm,” “Water Heater Inductive Charging,” “Cotton Tablet Leak Stop,” and “Hydrogen Powered Water Heater”
* Created SolidWorks flow simulations to validate and improve new concepts for tankless electric water heaters
* Redesigned the flagship heater core to improve quality and saved up to $35,000 by means of material reduction
* Improved the performance of the company’s red tag data entry system by migrating it from C++ to Excel VBA

**Project Experience**

**IBM Data Analytics Capstone Project**  *Mar. 2024*

Technology Trend Analysis

* Utilized data from a 2019 Stack Overflow developer survey to determine the most popular and fastest growing programming languages, databases, platforms, and web frames
* Accessed and Queried data in Python using web APIs, Beautiful Soup web scraping, Pandas, and SQLite
* Created three dashboards in Cognos Analytics to visualize the ten most popular technologies, the ten fastest growing technologies, and survey demographics according to Stack Overflow developer data

**Google Data Analytics Capstone Project**  *Aug. 2022*

Cyclistic Case Study

* Compared casual and membership rider behavior by cleaning, compiling, and analyzing bikeshare data in Excel
* Developed a Tableau dashboard to display that casual riders are more likely to ride on weekends, have a 175% longer average ride duration, and ride 80% less frequently than membership riders
* Determined that advertising bikeshare memberships as an alternative way to commute to work would increase sales