Justin Carder
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EDUCATION

Johns Hopkins University, Baltimore MD August 2019 – May 2023
Bachelor of Science in Mechanical Engineering Overall GPA: 3.76 (General Honors)
Relevant Coursework: Introduction to Computing, Calculus III, Probability and Statistics, Linear Algebra, Object Oriented Programming: Python, Gateway Computing: Matlab, Engineering Management & Leadership, Image Processing Data Visualization, Microeconomics

CERTIFICATIONS

Google Data Analytics Professional Certificate February 2024
Issued by: Google via Coursera
Developed proficiency in data analysis techniques, data manipulation tools (SQL, R, and Sheets), data visualization (Tableau), and data storytelling through assessment and hands-on projects.

DATA ANALYSIS AND ENGINEERING EXPERIENCE

Johns Hopkins University, Department of Mechanical Engineering
Senior Design Project Aug 2022 – May 2023

- As a group of four, we addressed Blind Industries and Services of Maryland's (BISM) shortage of straight white canes by designing and manufacturing three new customizable canes using bamboo, carbon fiber, and nylon with various handle options. Developed and implemented a blind-accessible manufacturing process on BISM's production floor. Conducted several tests with blind associates, gathered and analyzed the data in Excel, and iteratively improved the designs. Created visualizations in Excel and reports for weekly meetings with stakeholders to show our progress and explain the data-based decisions. Presented the award winning year-long project to the JHU Mechanical Engineering department and the American Society of Mechanical Engineers judges.

Image Processing Final Project March 2022 - May 2022

- Successfully completed a machine learning group project to colorize a black-and-white film using MATLAB's Deep Learning Toolbox. Extracted individual frames and manually annotated certain features (hat, coat, pants). Use these annotations as training data to train a neural network that colorized the features (red, blue, or green) in all frames. Then reassembled the colorized frames into a movie, demonstrating my knowledge of deep learning, MATLAB, and video processing.

Individual Data Analysis Projects Feb 2024 - Aug 2024

HONORS AND AWARDS

Dean's Design Award May 2023

- Demonstrated outstanding engineering design skills in the project for BISM

Dean's List Fall 2020, 2021

SKILLS

Data Analysis | Data Visualization | Programming Languages: Python, MATLAB, R, SQL | Relational Databases | Pattern Recognition | Excel/Sheets | Tableau | Machine Learning | Mechanical Design | CAD: SolidWorks | Collaboration | Communication | Problem-Solving