CATHY QIU

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SKILLS SUMMARY

Languages: C/C++, C#, Python, Java, JavaScript, HTML/CSS, SQL
Libraries/Tools: Pandas, NumPy, Matplotlib, .NET, Java Swing, Node.js, Git, Linux
Data Software: Power BI, LabVIEW

EDUCATION

University of Waterloo, Waterloo, ON	June 2024
BASc in Mechatronics Engineering	
• Minor in Cognitive Science	
Coursera, Deep Learning Specialization	Aug 2020
Udemy, Introduction to Node.js Development	July 2020

EXPERIENCE

Toyota – Software Engineering Intern | *C#, .NET, SQL Server, Linux, Power BI*   June 2020 – Aug 2020
- Integrated features for email notification system to send email alerts through SMTP by processing queried XML data from Oracle, SQL Server, and PostgreSQL databases, cutting **$400,000** in production costs
- Reduced manufacturing down time by **6%** using predictive analytics with Microsoft Azure Machine Learning and Power BI to optimize query processing in vehicle inspection database
- Supported Toyota Assembly Line Control server upgrade by collecting server performance data in Linux terminal and tracking data slow downs, decreasing development time by **16%**
- Developed and proposed scalable solutions regarding **25,000+** vehicle defects data to Toyota executives and VP

University of Waterloo – Research Assistant | *Python, LabVIEW, DAQ, sensors*   Sept 2018 – July 2019
Muscle Force and Contraction Regression Analysis
- Investigated neural control of muscle contraction by performing non-parametric analysis of machine learning
- Developed a model based on hypothesis testing to analyze the relationship between muscle force and contraction
Smart Shoe Insole
- Designed and developed an insole that captures an estimate of foot clearance to predict unexpected falls, neurological conditions were considered in research while achieving an accuracy of **94%**
- Built a device that connects insole to an exoskeleton to assist in walking performance and limb movements

Maple Precision – UI/UX Designer | *HTML/CSS, Illustrator, Photoshop*   July 2018 – Mar 2019
- Created a UI prototype of an interactive mapping software to allow users to acquire geological data
- Designed web platform mock-ups by assessing SEO strategies to increase website traffic by over **30%**

PROJECTS

Newsify | *Python, Vue.js, HTML/CSS, MeaningCloud API*
- Created a web app that receives URL of COVID-19 related news, summarizes contents using natural language processing API, and produces projections using linear regression in Python

JobJoe – TO Hacks Finalist | *Java, Android Studio, IBM Watson API*
- Created a job search chatbot app to process text-based user inputs and returns predefined responses
- Integrated user interface and user input controls using Android Studio

ProstHand | *C, LEGO NXT*
- Built a prosthetic hand that utilizes touch and gyro sensors to perform grasping and pinching movements
- Implemented a PID motor control algorithm to actuate a robotic hand with **93%** accuracy

Bomberman | *Java, Swing GUI Java*
- Developed a Bomberman-inspired game with keyboard controls to allow user navigation and player attacks

ACTIVITIES

Women in STEM – President & Co-Founder
- Founded and led a local organization for over **50** female students to promote involvement in STEM careers
- Presented and organized events on academics, career options and external guest speakers from STEM fields

University of Waterloo Data Science Club – Club Member
- Attended workshops covering topics including machine learning, data analysis, and data visualization

AWARDS

Dr. P. S. Ahuja Award for Women in STEM   Aug 2019
- Awarded based on academic excellence to one University of Waterloo female student enrolled in a STEM program