

Joshua Mauer

206-661-3511 | mauerj@uw.edu

EDUCATION

University of Washington

Bachelors of Science in Electrical and Computer Engineering (ABET - Accredited)

Seattle, WA

Sept. 2018 – June 2021

Bellevue College

Associate Transfer Degree, Engineering

Bellevue, WA

Sept. 2017 – Aug. 2018

SKILLS

Programming Languages: Java, Python, C++, C#, MATLAB, SQL

Relevant Coursework: Computer Science I/II, Engineering Physics I/II/III, Calculus I/II/III/IV, Differential Equations, Linear Algebra, Advanced Multivariable Calculus, Circuit Theory, Continuous Linear Time Systems, Energy Systems, Control System Analysis, Devices and Circuits, Power Electronics Design

Engineering Tools: SolidWorks, AutoCAD 2018, Revit, Altium, LTspice, Arduino

Other Tools: Microsoft Office 2016 (Word, Excel, PowerPoint, Outlook, Access, SharePoint, InfoPath)

Spoken Languages: English, Mandarin

Character Strengths: Clear communicator, works well with groups, self-directed worker

EXPERIENCE

Implementation Planning Intern

Sept. 2016 – Present

City of Bellevue Department of Transportation

Bellevue, WA

- Developed a database to store and track ongoing transportation projects and their costs. Automated various parts of the biennial budget cycle. Used InfoPath, SharePoint, Access, and Excel to calculate budget estimates, which were sent to City Council. Was awarded a departmental award and bonus in recognition.
- Developed a standalone desktop application in Java and later in C# (described below in "Projects") to further improve the above budget process.
- Developed a presentation and activities to train staff to comply with Title VI of the 1964 Civil Rights Act. After completing the training materials, helped lead ongoing citywide training exercises. Was awarded a departmental award and bonus in recognition.
- Redesigned the above Civil Rights training for a fully-online format to meet the needs of the post-pandemic work environment. Created Zoom-based activities and continued to help lead staff training efforts.
- Analyzed demographics data and developed a Limited English Proficiency (LEP) plan to help facilitate translation of Vital Documents and equitable access to city services.
- Worked with the grants team to research and apply for Transportation Improvement Board (TIB) funding for eligible city projects. Performed outreach to various nominating agencies. Crafted and edited grant applications.
- Created a business plan and helped apply for federal grant funding to create a city UAS (Unmanned Aerial Systems) program.

PROJECTS

MANDOCalc | Java, C#, Microsoft Access, Excel, InfoPath, SharePoint

May 2020 – Present

- After an unexpected loss of mission-critical data, took the initiative to develop a standalone desktop application to automatically perform budget calculations for the City of Bellevue
- Program was initially developed in Java to replace the City's Access database
- Program was later developed in C# for improved long-term organizational support
- Program takes a submitted list of projects hosted on SharePoint, and computes per-project, per-line item, and inflation-adjusted costs with an easy to use graphical user interface
- Was sole developer for a non-technical finance team, conceived of and published application independently with little direct guidance
- All phases of the project were undertaken and tested remotely due to the COVID-19 pandemic.

EE 452 Lab Project: Power Electronics Design | PCB placement and design, Soldering

Sept. – Dec. 2020

- Designed PWM, gate driver, current sensor, boost converter, and motor drive components for an in-class senior laboratory project.
- Stages were modelled in LTspice and soldered to a PCB over the course of 11 weeks.