

# SIEGFRIED PESCHKE

Personal Website: [sigipeschke.github.io](https://sigipeschke.github.io)

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## EDUCATION

**University of Calgary**  
Bachelor of Science  
*Major in Physics*

## STRENGTHS & SKILLS

- |                            |              |              |
|----------------------------|--------------|--------------|
| · Research & Data Analysis | · HTML       | · Java       |
| · Calculus & Statistics    | · CSS        | · Python     |
| · Analytical Thinking      | · JavaScript | · TensorFlow |
| · Technical Writing        | · TypeScript | · AutoIT     |
| · Strong Collaborator      | · Angular    | · Latex      |

## PROJECTS

### Atmospheric Monitoring System

- A raspberry pi unit is utilized in conjunction with a barometer and particle counter to measure temperature, pressure, humidity and particle counts per mass bin.
- A server utilizing TCP sockets was built in python alongside a python GUI application to both display and manipulate data using filters and trend setting.

### Personal Coding Projects

#### InvestmentIQ

- Developed an Angular-based UI which presents a full summary of the user's stock portfolio in a single, customizable, and sortable view. Selecting a stock reveals the associated ledger and all available current and historical data. Includes a watchlist and discovery feature of North-American markets.
- Built a Java + Springboot server which interfaces with the MySQL database to fetch and write user investment history. Matches the user ledger with stock data provided by YahooFinance.

#### Population Insights

- An interactive demo of population distribution across countries and plots of population growth of individual countries since the 1960's. Designed in Angular utilizing the HighCharts package.

#### Bookworms Haven

- A Book Library whose focus was on dynamic and responsive data presentation using observables along with user forms to filter through the 1000 book dataset. Selecting a book displays details, a brief description and the selection on Amazon. Designed in Angular utilizing the PrimeNG Package.

#### JavaScript Games

- Basic games including Tic Tac Toe, 2048, War and BlackJack. Simple practice projects which reinforced JavaScript skills by handling user input and rules of each game, along with HTML and CSS.

## WORK EXPERIENCE

**University of Calgary Isotope Laboratory, Calgary AB**  
*Senior Thesis & Software Developer*

Jan 2020 - Sept 2020

- Dramatically improved experimental procedure of lead isotope analysis by adjusting ion exchange procedure which resulted in 2726% reduction of lead content in control samples.
- Successfully designed and built a thermostat; raspberry pi based measurement unit with a full GUI.
- Thermostat measurement system included a high fidelity particle counter for accurate tracking of atmospheric contamination in laboratory clean room.