

AKSHAT KALRA

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TECHNICAL SKILLS

Programming Languages: Java, C++, JavaScript, Python, HTML, CSS, R, Racket(Dialect of Lisp)

Frontend: Vanilla Javascript, HTML, CSS, ReactJS

Backend: Node.js, Express.js, MongoDB

Statistical Data Analysis: R (Programming Language), Python, Asymptotic Tests, Hypotheses Testing & Bootstrapping

Additional Skills: Git, GitHub, LaTeX

EXPERIENCE

UBC, Department of Philosophy: Undergraduate Teaching Assistant

Sep 2023 - Dec 2023

- Undergraduate Teaching Assistant (UTA) for PHIL 220 (Symbolic Logic), a **second year philosophy course** that introduces **sentential logic** and **predicate logic**.
- Translation from natural language; truth tables and interpretations; **systems of natural deduction** up to **relational predicate logic** with identity; alternative proof methods.

ACADEMIC PROJECTS

FitTrackr: A Comprehensive Health and Fitness Companion

Jan 2024 - Apr 2024

Developed a Java-based application that allows fitness enthusiasts to scientifically optimize their workouts and track progress. Used **Java Swing** for GUI and **JUnit5** for unit testing the application. Key features include:

- Logging workouts with exercises, sets, reps, and weights
- Calculating and tracking total workout volume
- Visualizing progress in specific exercises over time
- Displaying overall workout volume and progress since day one
- Saving and loading workout data for long-term tracking

Statistical Inference on Whether Ticket Classes affect Survival on the RMS Titanic

Jan 2023 - Apr 2023

Collaborated in a team of four to conduct a statistical inferential analysis as a part of the final project for our STAT 201 class.

- Used the "Titanic - Machine Learning from Disaster" data set from Kaggle.
- The inferential question targeted was "Does the ticket class on the RMS Titanic determine whether they survived or not?".
- Utilized **Hypothesis testing**, **Bootstrap Methods**, **Standard Error Method** and **Two-Sample Z-Test** to arrive at an interesting conclusion.
- Received a perfect score of 100/100 for the final project.

CASE COMPETITIONS

Bolt Case Competition, Vancouver, BC: UBC (Sauder School of Business)

April 2023

- Collaborated with a team to develop a solution aimed at reducing carbon emissions for company X.
- Analysed the datasets using Celonis and R and presented the solution in front of a panel of judges from the industry of business analytics.
- Semi-Finalist at the competition overall

EDUCATION

Bachelor of Science, Statistics with Thematic Concentration in Computer Science | Dean's Honour List | OIS Scholar

Graduating May 2027

University of British Columbia, Vancouver, BC

Current GPA: 4.30/4.33

Faculty of Science

Relevant coursework: CPSC 210 (**Software Construction**) [91], CPSC 121 (**Discrete Mathematics**) [93], CPSC 221 (**Data Structures and Algorithms**), DSCI 100 & STAT 201 (**Data Science & Statistical Inference with Data Science**) [88], STAT 302 (**Introduction to Probability**) [91].