# JESSE HANTULA

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## EDUCATION

**University of Helsinki**                                                                                                          **Helsinki, Finland**
*BSc in Computer Science*                                                                                             *September 2021 - Present*

**Nashua High School South**                                                                                          **Nashua, NH, USA**
*High School Diploma*                                                                                                         *August 2017 - June 2021*

## WORK EXPERIENCE

**DB Solo LLC**                                                                                                                          **Nashua, NH, USA**
*Software Developer*                                                                                                         *May 2023 - August 2023*

- Designed and implemented a command-line interface to Offset Explorer (Java-based GUI application for managing Apache Kafka clusters). Also implemented several new UI-features to Offset Explorer using Java Swing classes.
- Wrote unit tests using JUnit to test and validate the implemented features.
- Added new features to a Java-based database management application DB Solo.
- Wrote documentation pages for both applications using HTML and CSS.
- Utilized Git for version control and GitHub pull requests for code reviews.
- Manually tested new features against a local Kafka node running in Docker as well as cloud-based Azure Event Hubs cluster.

**University of Helsinki**                                                                                              **Helsinki, Finland**
*Course assistant: Intro to Programming + Advanced Programming*                 *September 2023 - December 2023*

- Provided personal support to students by conducting weekly workshops focused on programming exercises, reinforcing their understanding of course material.
- Offered personalized guidance and assistance to students, helping them overcome coding challenges and improve their problem-solving skills.
- Maintained an online presence on several platforms through which students can reach out for additional assistance.
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**University of Helsinki**                                                                                              **Helsinki, Finland**
*Teaching assistant: Computing platforms*                                                           *January 2024 - March 2024*

- Conducted two weekly exercise sessions, guiding around 50 course students through weekly homework solutions, addressing questions, and offering assistance.
- Collaborated weekly with the professor to discuss course objectives, formulate exercise solutions, and ensure alignment with instructional goals.
- Aided the course professor in grading quizzes and exams for students in both English and Finnish.

## LEADERSHIP EXPERIENCE

**University of Helsinki**                                                                                              **Helsinki, Finland**
*Tutor coordinator: Bachelor's of Science Program*                                       *December 2022 - September 2023*

- Orchestrated multiple group interviews to evaluate and select tutoring candidates for the autumn 2023 semester, ensuring the recruitment of highly qualified and motivated individuals.
- Developed a comprehensive event calendar for the introduction week for incoming students, ensuring a seamless orientation experience and fostering a positive onboarding atmosphere.
- Collaborated closely with the program director to streamline administrative procedures and facilitate effective communication, contributing to the efficient operation of the Bachelor's of Science program.

## PROJECTS

*HSL Bike Planner*                                                                                                          *September 2023 - October 2023*

- Initiated and executed a data analysis project focusing on Helsinki public city bike usage in correlation with Helsinki weather conditions.
- Gathered and processed multiple datasets, which were then used to develop a predictive model that is used to forecast bike utilization for future dates.
- Designed and implemented a user-friendly UI map, enabling users to visualize and interact with predicted bike stop occupancy.

*Connect 4 AI*                                                                                                                 *November 2023 - December 2023*

- Developed a Connect 4 AI using the minimax algorithm, enhancing decision-making capabilities for the computer player in the game. Implemented alpha-beta pruning to optimize the algorithm and make the AI slightly more efficient.
- Designed and implemented a user-friendly GUI  using Java swing classes, providing an interactive platform for users to play against the AI.
- Employed JUnit testing framework to test the functionality and correctness of the Connect 4 AI, ensuring optimal performance.

## RELEVANT COURSEWORK

- *Computer Science:* Data Structures & Algorithms, Introduction to Databases, Introduction to Cybersecurity, Data Analysis in Python, Software Development Methods, Full Stack Development
- *Data Science:* Introduction to Data Science, Introduction to Machine Learning, Bayesian Data Analysis, Statistics for Data Science, Introduction to Deep Learning
- *Math:* Linear algebra I & II

## ADDITIONAL INFORMATION

- *Relevant Skills*: Python, Java, C++, R, SQL, HTML, Excel, JavaScript, Haskell, Microsoft Azure, Apache Kafka, React, Node.js, Express
- *Languages*: English, Finnish, Intermediate Spanish, Beginner Swedish