

# Vishay Singh . Jarvis Consulting

Hello there! My name is Vishay Singh and I graduated from the University of Toronto with an Honours Bachelor's Degree of Science, majoring in Computer Science and French Studies. Since a young age, I've been fascinated by what technology can do to solve real world problems, which is exactly what I want to do in the software industry. In fact, learning new things is a passion of mine, so software provides the perfect avenue to continually challenge myself. This mindset lead to my projects at Jarvis, which includes a Linux/SQL server usage bot, a Java grep implementation & JDBC app, a Twitter CRD backend app, a fullstack React.js & SpringBoot trading app, and an Azure & Kubernetes DevOps project. Before Jarvis, I was involved in different projects like a MERN stack web app, an RNN generative song lyric model, and a lecture/tutorial on rootkits with respect to cybersecurity. In my spare time, I'm either building computers, coding, playing video games, or learning guitar.

## Skills

**Proficient:** Java, Linux/Bash, RDBMS/SQL, Agile/Scrum, Git, Python, RESTful services, Docker, Spring/SpringBoot, Azure & Kubernetes, Jenkins

**Competent:** React.js, C, JavaScript, Numpy, scikit-learn, Pandas, Pytorch, Matplotlib, JIRA, CI/CD, Maven, MongoDB, Neo4J, Swagger

**Familiar:** Racket & Haskell, R, Assembly, HTML, CSS, C++, Express.js, Node.js

## Jarvis Projects

Project source code: [https://github.com/jarviscanada/jarvis\\_data\\_eng\\_VishaySingh](https://github.com/jarviscanada/jarvis_data_eng_VishaySingh)

**Cluster Monitor** [GitHub]: Designed, implemented, tested, and deployed a Linux Cluster Monitoring Agent that allows businesses to monitor and find server nodes that are underperforming, resulting in optimized resource allocation for the entire cluster.

**Core Java Apps** [GitHub]:

- **Twitter App:** Designed, implemented, tested, and deployed a backend Java app that can CRD tweets using Twitter's REST API. Common design patterns & frameworks were leveraged to design this app, such as MVC architecture, DAOs, and Spring Dependency Injection. Implemented using HTTP client, core Java libraries, maven, and Spring-Boot. Integration and Unit testing using JUnit and Mockito, resulted in a well-tested app published on DockerHub.
- **JDBC App:** Designed, implemented, tested, and deployed a Java app that uses the JDBC library, the DAO design pattern, a Docker PostgreSQL database, IntelliJ IDE, and DBeaver client to CRUD persisted sales data, resulting in atomic business-related queries.
- **Grep App:** Designed, implemented, tested, and deployed a Java implementation of the Linux grep command using features/libraries (like regex, lambda, Stream APIs, and JUnit), which recursively traverses file paths resulting in an output file with all matching strings.

**Springboot App** [GitHub]: Designed, implemented, tested, and deployed a backend trading app that can create and manage clients/accounts, and execute security orders on stocks defined by IEX Cloud's REST API. This app leverages three-tier architecture, microservices, and DAO design patterns. It was written with standard Java libraries, SpringBoot Inversion of Control, SwaggerUI, PostgreSQL external databases, Maven, and deployed using Docker.

**Frontend/React** [GitHub]: Designed, implemented, tested, and deployed a frontend app that built upon the SpringBoot project's backend which provides traders a clean UI where they can add accounts, check stock quotes, and read/update their account info. All components were built using React.js, styled using S/CSS, managed using NPM, tested in the browser, and deployed using Docker.

**Cloud/DevOps** [GitHub]: Deployed two pipelines for CI/CD of development and production environments for the SpringBoot trading app. The pipelines were built using Azure, Kubernetes, ACR Docker, and Jenkins, resulting in a 99.9% database availability guarantee, automated load balancing, and significantly higher fault resiliency for the SpringBoot trading app.

**Python Data Analytics** [GitHub]: In progress.

## Highlighted Projects

**Google Developer Student Club Website** [GitHub]: Designed, implemented, and tested an MVC architecture web application using the MERN stack (MongoDB, Express.js, React.js, Node.js) in a team of 6.

**Deep Learning - RNN Lyric Generation Model** [GitHub]: Designed, implemented, trained, and tested an RNN Generative Model to achieve a 58% test accuracy.

**Information Security - Rootkit Lecture and Tutorial** [GitHub]: Collaborated with a partner to create an in-depth presentation, lab, and assignment about rootkits that exploit the Linux LD\_PRELOAD environment variable.

## Professional Experiences

**Software Engineer (Bilingual / Entry Level), Jarvis (2022-present)**: Designed, implemented, tested, and deployed software projects relating to Linux/Bash scripting, SQL, and Java, using Agile/Scrum methodology, Git Flow, and Docker. Attended and passed Master Code Review meetings that certify acceptable code quality and requisite knowledge. Lead daily stand-up meetings during sprints, which coordinated and tracked scrum team progress.

**Computer Technician, Freelance (2017-present)**: Constructed, tested, and overclocked custom PC hardware resulting in hundreds of prompt solutions for satisfied clients.

## Education

**University of Toronto, Mississauga (2018-2022)**, Honours Bachelor of Science (HSc.), Mathematical and Computational Sciences - UTM Entrance Scholarship - University of Toronto Grants (UTAPS) 2019-2022 - CGPA: 3.27/4.0 - Final Year GPA: 3.71/4.0

## Miscellaneous

- Beginner guitarist
- Competitive/casual gaming
- Recreational fitness
- Film/TV/literature analysis