

Rafay Kamran

linkedin.com/in/rafaykamran

Email: rafay.kamran@yahoo.com

Mobile: +44 7453 575799

EDUCATION

University of Surrey

Bachelor of Science in Computer Science

September 2019 - June 2021

First class

Swansea University

Bachelor of Science in Computer Science

September 2018 - June 2019

First class

Relevant Modules: Distributed Systems, Computer Security, Engineering Internet Scale Systems, AI and Deep Learning, Web Applications Development, Software Engineering Project, Computer Networking and more

EXPERIENCE

IBM

July 2017 - August 2017

Software Engineer Intern

- Participated in educational courses focusing on AI, Cloud and Software Engineering, shadowed an employee, explored various tasks performed and technologies used at IBM and assisted with daily activities.
- Created, trained, and deployed an instance of IBM Watson's AI Visual Recognition API using large data sets on IBM Cloud.
- Linked the previously mentioned model via an external API to a Java application created to identify dog breeds within an image.

PROJECTS

Local Exchange Trading System

(Ongoing)

Spring Boot, React, Java, HTML, CSS, MySQL, AWS, Docker

- Designed and implemented a web application where university students can create, like, dislike, comment and bid on posts which request/offers goods and services. Bidding is accomplished via an in-app complementary currency.
- Developed extensive REST API's using data transfer objects to communicate between the presentation layer and service layer while Spring JPA repositories are used to persist data on the database.
- Engineered authentication using a JWT filter on selected API requests, the JWT's are stored in memory and refresh tokens are stored in the cookies in order to avoid XSS and CSRF attacks. Account verification is sent via email using an SMTP server.
- Utilised React components to create UI elements, for example, post feed functionality is accomplished by querying the post API on mount and rendering multiple post item components.

Personal Finance Full Stack Application

Spring Boot, Java, HTML, CSS, Javascript, PostgreSQL

- Implemented secure bank account sign in using the Plaid API which allows the application to retrieve a user's transaction history. Data was used to generate graphs and analytics using chart.js.
- Created a REST API to allow the user to create and manage budgets and constructed user authentication with Spring Security using Bcrypt for password encryption.

Sudoku Solver and Web Scraper

Java, JavaFX, JUnit, JSoup

- Implemented a backtracking algorithm to recursively solve a sudoku puzzle.
- Built a web scraper to retrieve sudoku puzzles from the HTML code on www.menneske.no.
- Created a GUI using JavaFX and validated software code by implementing unit testing.

Social Media Network Implementation

Java

- Developed an application with an emphasis on object oriented programming which stores users of a social network in a graph and offers friend recommendations.
- Friend recommendation functionality is implemented by populating a binary search tree with users and their profiles. The root is the user looking for recommendations and the tree is traversed using breadth first search to find users with mutual friends.

TECHNICAL SKILLS

Languages: Java, JavaScript, Python, HTML, CSS, SQL

Tools: Spring Boot, Node.js, Express.js, React.js, AWS, Docker, Git, PostgreSQL, MySQL, MongoDB, JUnit, Postman

Other: OOP (Object Oriented Programming), MVC (Model View Controller), Microservices, 3-Tier Architecture, Agile

EXTRACURRICULAR

- Ran an after school computer science club where I tutored A Level and GCSE level secondary school students
- Deputy head organiser for a series of events with up to 100 attendees. Responsibilities include: Liaising with venues, organising travel for international attendees, overseeing event days, venue setup, live streaming the event and more