SATRAJIT CHATTERJEE

Computer Science And Mathematics Dual Major Student

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WORK EXPERIENCE

SRE Software Developer
RBC Royal Bank of Canada

📅 January 2022 – April 2022   ⚲ Toronto, Canada

- Investigated **SRE** solutions to analyze data from **SLI** logs using **supervised learning** and predict **error budget** of on-boarded services.
- Implemented employee portfolio of internal services by generating **GraphQL** endpoints using **ElasticSearch** and **PostgreSQL** queries, with upgraded queries that improved data access time by **40%**.
- Created interactive service **dependency graphs** in **React** using **React Flow** and **MUI** with adaptive node generation and positioning.
- Designed **flow**-based interactive prototypes using **Figma** and **LucidChart** and implemented them over a sprint-based **Agile** environment.
- Managed project deployment using containers on **OpenShift** and **Helios**.

Full-Stack Software Developer
uOttawa Engineering Outreach

📅 May 2020 – December 2021   ⚲ Ottawa, Canada

- Developed a frontend session management interface using **Typescript**, **Angular** , **SCSS** and **Bootstrap** with UI designed using **Figma**.
- Built **REST API** endpoints in **Spring Boot** with **Java servlets** and **JSON schemas**, tested using **Postman** and logged statistics using **GoLang**.
- Optimized testing suite with **60%** reduced stack execution time, migrating tests from **Selenium** to **Protractor** and end-to-end testing to **Cypress**.
- Enhanced **API** responses by writing efficient **PostgreSQL** queries, speeding up endpoint services and batch calls by **90%**.
- Utilized AWS services such as **S3** buckets for storage and **ECS** for **Docker** deployment with continuous integration using **Travis CI**.

PROJECTS

Picanote - *Online Learning Transcription Application*

- An app to aid learning with **OCR** support to push images and text notes to the cloud using a **REST API**, paired with a mobile app to search through, view and modify existing cloud notes, with summaries using **NLP**.

Python · Tesseract · GCP Functions · Firebase · Flutter

KaratAI - *Karate And Fitness Trainer*

- Web application with posture **recognition** using mapping of selective real-time video frame processing, and a scoring system to train users in Karate.

OpenCV · Flask · Python · React · Express · Adobe XD

Untitled Blob Simulation - *Game Design And Development*

- Multiplayer game on Unity with netcode to manage **concurrent** events. Pixel art assets on Adobe Photoshop were animated with accurate physics.

Unity · C# · Photoshop · Aseprite · Python · UDP

EDUCATION

Joint Honours BSc in Computer Science and Mathematics **(3rd Year)**
University Of Ottawa

🎓 **CGPA: 9.0 (Equivalent to 4.0 GPA)**

📅 September 2019 - December 2023 (Expected)

Received **uOttawa Chancellor's Scholarship**

TECHNICAL SKILLS

Languages

Java · Python · GoLang · Node · C · Elixir · TypeScript · JavaScript · C++ · C# · SCSS · Ruby · R · OCaml

Frameworks

Angular · React · Express · Cypress

Backend

PostgreSQL · GraphQL · ElasticSearch · Spring Boot · Apache Sling · Firebase

Libraries

Numpy · Scikit-learn · OpenCV · d3

Tools

Git · Jira · Docker · Linux · Bash · Unity · AWS · Swagger · Travis CI · Android Studio · React Native · Flutter

SKILLS FROM ACADEMICS

- Software architecture, design patterns, UML
- Object oriented and dynamic programming
- Discrete structures, logic and cryptography
- Virtualization and operating systems
- Network protocols(TCP/IP, UDP, FTP, HTTP)

ORGANIZATIONS

CS Student Association
Academic Vice President

- Contributed to **resolving academic issues** and **wrote resolutions** at round-table meetings.
- Organized academic and social events like **AI Workshops** and **Resume Roasts** for students.

CERTIFICATIONS

- **IBM Blockchain Essentials**
- **AWS Cloud Practitioner Essentials**