

SARTHAK SETHI

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EDUCATION

University of Waterloo

Honours Bachelor of Computer Science

Waterloo, ON

Sep 2024 – May 2029

TECHNICAL SKILLS

Languages & Web: Python, Kotlin, C/C++, JavaScript, SQL, HTML/CSS

APIs/Frameworks: React, Node.js, Flask, OpenCV, MediaPipe, REST API

Technologies: AWS (EC2, RDS, S3), Docker, Kubernetes, Firebase, Jenkins, MySQL, PostgreSQL, Git, Figma, Canva, Power BI, Cursor, Pear AI

Concepts: Microservices, Cloud Deployment, CI/CD, Agile, TDD

WORK EXPERIENCE

Front-End Lead

Aug 2023 – Jul 2024

Prompt Solutions India

India

- Built a **HIPAA-compliant healthcare platform** integrating hospital locations, emergency services, and online consultations for thousands of users.
- Architected a **microservices backend** on AWS (EC2, RDS, S3) using Python (Flask) with CI/CD pipelines via Jenkins.
- Developed the **front end** with React (web) and Kotlin (Android), leveraging Redux for state management.
- Led a **cross-functional team** of 5 developers, ensuring on-time delivery and stakeholder satisfaction.
- Launched with **10,000+ user sign-ups**, improving emergency response efficiency by **30%**.

Software Engineer Co-op

Jun 2023 – Jul 2023

Nokia India

India

- Modernized an **outdated bug tracking system** to reduce duplicate efforts and improve resolution times.
- Revamped using Node.js and Express, optimizing PostgreSQL queries to **boost performance by 40%**.
- Created **custom React dashboards** with D3.js for real-time analytics and deployed via Docker.
- Integrated **unit testing** with Jest, achieving **90% code coverage** and reducing bug recurrence.
- Implemented **automated triaging** and real-time analytics, reducing duplicate tickets by **40%** and resolution times by **25%**.

Digital Marketing Analyst

Oct 2022 – Dec 2022

Creative Stree India

India

- Leveraged **A/B testing** to boost brand visibility and user engagement through creative digital solutions.
- Developed **interactive web assets** using HTML/CSS and JavaScript, ensuring brand alignment.
- Optimized **digital campaigns** with SEO and analytics tools, boosting online traffic.

PROJECTS

🐙 GIM - Gesture Interactive Mouse | Python, OpenCV, MediaPipe, ML 🔗

Waterloo, ON, Canada

- Developed a **gesture recognition system** using Python, OpenCV, and MediaPipe for hands-free mouse control.
- Implemented **hand tracking algorithms** for 21 landmarks, achieving **<50ms latency** via parallel processing.
- Designed **custom gesture patterns** for click, drag, and scroll, ensuring intuitive interaction.
- Conducted **usability testing** with 20+ users, achieving **95% satisfaction** and refining gesture accuracy.
- Created an **intuitive calibration system** for lighting conditions and user environments, enhancing reliability.

🐙 Personal Portfolio Website | React.js, HTML, CSS, JavaScript 🔗

Waterloo, ON, Canada

- Built a **responsive portfolio website** with React.js, HTML, CSS, and JavaScript to showcase projects.
- Designed a **dynamic user interface** with component-based architecture for cross-device compatibility.
- Integrated **SEO optimization**, increasing website visibility and reducing load times.
- Implemented **interactive project showcases** to highlight technical expertise and personal branding.

🐙 CarRaksha - Safe Driving System | C++, Arduino 🔗

India

- Developed a **vehicle safety system** in C++ on Arduino for collision prevention.
- Integrated **MQ-3 alcohol** and **ultrasonic sensors**, enabling automatic stops, reducing accidents by **15%**.
- Programmed a **speed sensor** to cap vehicle velocity, enhancing safety metrics.
- Tested in **real-world conditions** with 10+ vehicles, achieving **100% reliability** in safety interventions.
- Implemented **image processing** for drowsiness detection, boosting driver alertness by **20%**.

🐙 iMoney - Banknote Identifier | Python, OpenCV 🔗

India

- Validated a **banknote identifier** with user-centric design, ensuring customer alignment.
- Developed **detection algorithms** in Python and OpenCV, achieving **95% accuracy**.
- Built an **ETL pipeline** with Python and SQL for real-time analytics.
- Optimized **image processing workflows** to enhance detection speed and scalability.