

# DEEP LEKHAK

Kitchener, ON

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🌐 [github.com/Deep03](https://github.com/Deep03)

## Technical Skills

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**Languages:** Python, Java, C, HTML/CSS, JavaScript, SQL, Bash

**Developer Tools:** VS Code, Eclipse, Git, IntelliJ, Docker

**Technologies/Frameworks:** React, Node.js, PostgreSQL, MongoDB, MySQL, TensorFlow, NumPy

## Experience

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### WEA Microsoft

May 2023 - September 2023

*Group Member*

*Waterloo, ON*

- Worked in a cross-institutional project between UW and Microsoft, playing an integral role within a dedicated team of 5 to conceptualize an AI-based pipeline for a cutting-edge travel itinerary project.
- Innovatively explored diverse methodologies for data storage, encryption, and project deployment, contributing to the project's robustness and security measures.
- Projected the use of advanced Azure Cloud Services extensively throughout the project lifecycle, which provided adept, scalable, efficient, and secure solutions within a cloud-based environment.

### Hack The North

September 2022

*Organizer*

*Waterloo, ON*

- Orchestrated logistical aspects of the hackathon such as supervising mentors, judges, and ensured the smooth execution of the entire event through effective leadership.
- Cultivated skills in multitasking, decision-making, and problem-solving through the collaboration with multiple teams.

### Math Tutor

March 2021 - September 2022

*Tutor*

*Waterloo, ON*

- Provided hourly math tutorials to grade 11/12 students on topics such as Calculus and Algebra.

## Projects

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### RSA Algorithm 🛡️ | *Java, PostgreSQL*

November 2023

- Independently implemented the RSA algorithm, showcasing a strong understanding of modular arithmetic and cryptography principles.
- Ensured a high level of security by employing a key size of 1024+ bits, meeting robust encryption and decryption standards.
- Integrated a secure key storage management system by incorporating hashing functions with a PostgreSQL database.

### Facial Recognition AI \*WIP... 🛡️ | *Python, TensorFlow, OpenCV, NumPy, MySQL, FaceNet*

January 2023

- Developed a robust facial recognition AI system using the DigiFace 1M dataset from Microsoft.
- Implemented the FaceNet Unified Embedding paper to develop a facial recognition model using TensorFlow, OpenCV, and NumPy
- Integrated the model with a MySQL database, enabling efficient storage, retrieval, and recognition of facial profiles for user authentication.

### File Transfer Web App 🛡️ | *JavaScript, React, Node.js, MongoDB, PeerJS, WebRTC*

December 2023

- Developed a File Transfer web application using a tech stack inclusive of JavaScript, React, Node.js and MongoDB
- Implemented a user authentication system within the application by integrating MongoDB
- Leveraged PeerJS and WebRTC technologies proficiently to enable direct peer-to-peer file transfer functionality, showcasing expertise in real-time communication.

## Education

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### University of Waterloo

Sep. 2022 - May 2027

*Bachelor of Mathematics Honors*

*Waterloo, ON*