

# Bishwas Bhattarai

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## EDUCATION

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### University of Alberta

*BS in Computer Science*

GPA: 3.4/4.0

Edmonton, Alberta

*Expected Graduation: May 2025*

## EXPERIENCE

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### OurPowerTeam

*Software Developer Intern*

*June 2022 - September 2022*

- Collaborated closely with senior developers to design a robust REST API architecture.
- Develop WireFrame and Mockup for a user-friendly and engaging app.
- Worked with experienced developers and managers to solve enduring data issues.

### University of Alberta

*Undergraduate Research Assistant*

*May 2024 - Current*

- Replicated a research paper from the lab, ensuring accurate reproduction of results.
- Assisted graduate students with their research projects, contributing to data analysis and interpretation.

## PROJECTS

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### Android App (Java)

- Developed an Android inventory management application using Java and Android Studio IDE.
- Utilized Firebase for persistent inventory data storage and real-time updates.
- Secured user logins with Google Firebase and stored user data for a personalized experience.

### Twitter Tracking Web App

- Created a Web App that tracks key words from a twitter user and notifies customer based on it.
- Secured user logins with Google Firebase and stored user data for a personalized experience.
- Used Twitter API to track tweets and SendGrid API to send emails to respective users.

### Ray Tracing from Scratch(C++)

- Designed a ray tracer with a modular and extensible architecture by employing OOP principles.
- Utilized vector and matrix operations for ray transformation and camera setup.

### Neural Network from Scratch

- Used Numpy to create Neural Network to correctly identify MNIST doodles.
- Utilized and Implemented back-propagation and Vanilla gradient descent for training.

### Deep Q-Network cartpole agent

- Employed PyTorch's autograd capabilities to compute gradients and implement backpropagation.
- Implemented Q-learning algorithm with neural networks to optimize action-selection policies.

## Technical Skills

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- Programming Languages: Python, C/C++, C#, JavaScript, HTML/CSS, UML, TypeScript, Java, SQL, R, RISC-V
- Frameworks: React, Git, Express, Nest, Node, Android Studios, Unity