GARAB PHUNTSHO WANGYEL

AI & Data Science | Cybersecurity | Computer Vision | Full-Stack Developer

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PERSONAL STATEMENT

Resourceful Computer Science student at GCIT specialising in AI, data science, and cybersecurity, with hands-on delivery across 10+ academic, hackathon, and production projects. Built real-time AI systems such as GameFit AI and AirMusic AI, contributed to a Bhutan NDI-backed signing platform that placed 3rd in a GovTech blockchain hackathon, and developed 2 production websites for Depel. Ready to contribute to teams building secure, user-focused software where machine learning, web engineering, and practical UX meet.

TECHNICAL SKILLS

Programming & Data Science:
Python, JavaScript, TypeScript, SQL, Pandas, NumPy, Matplotlib, Data Visualization

AI, ML & Computer Vision:
PyTorch, TensorFlow, Scikit-learn, OpenCV, YOLOv8, YOLOv9, CNNs, MediaPipe

Web Development:
React, Next.js, Tailwind CSS, Node.js, Express

Databases:
MongoDB, MySQL, PostgreSQL

Cybersecurity:
OWASP, Web Security, Vulnerability Analysis, DevSecOps

Tools & Platforms:
Git, GitHub, GitLab, Docker, VS Code, Linux

SOFT SKILLS

Problem Solving • Communication • Teamwork & Collaboration • Leadership • Adaptability • Time Management

EDUCATION

Gyalpozhing College of Information Technology (GCIT), Royal University of Bhutan | 2023 - 2027
Bachelor of Science in Computer Science
- Expected Graduation: 2027
- Currently Year III, Semester II
- Relevant coursework: Machine Learning, Cybersecurity, Data Visualization, Database Systems, Software Engineering

Ugyen Academy Higher Secondary School | 2021 - 2022
Arts with Mathematics and Economics
- Completed higher secondary studies with Mathematics and Economics
- Recognized for academic excellence, CodeMonkey, peer mediation, class leadership, literature, and school activities

EXPERIENCE

Web Development Intern | May - July 2026
Impact Hub Thimphu
- Contributed to client-focused website development and digital project delivery in a professional environment.
- Worked on web design, frontend implementation, and interface improvements for real-world users.
- Translated project requirements into usable digital interfaces through collaborative feedback cycles.

Web Developer | 2025 - 2026
Depel Travel & Depel Institute
- Designed and developed 2 production websites for Depel Travel and Depel Institute.
- Built responsive frontend interfaces and reusable web sections focused on usability and presentation.
- Maintained and improved website content, layout, and functionality across 2 organizational sites.

LEADERSHIP EXPERIENCE

Peer Mediator | 2021 - 2022
Ugyen Academy
• Certified for student-support and conflict-resolution responsibilities.

Class Captain | 2021 - 2022
Ugyen Academy
• Supported classroom coordination, student communication, and leadership responsibilities.

Communication & Literature Activities | 2021 - 2022
Ugyen Academy
• Participated in Extempore Speech, Dzongkha Debate, essay writing, spell bee, drama, and reading-program activities.

PROJECTS

AirMusic AI | 2026
Role: Developer, UI/UX, Model Training | Type: Real-Time Gesture-Driven Virtual Instrument
• Built a webcam-based virtual instrument system that lets users control 2 instruments: drums and guitar.
• Used MediaPipe, OpenCV, and a trained motion-recognition model to translate hand/body movements into real-time musical actions.
• Trained gesture recognition for 6 movements with 94% accuracy, improving responsiveness for live interaction.
• Released a browser-based interaction flow, reducing dependence on physical instruments or MIDI controllers.

Sayig - Digital Document Signing | 2026
Role: Full-Stack / Blockchain Developer | Type: Digital Identity & Signing
• Built a Bhutanese document signing and verification platform with Bhutan NDI integration.
• Implemented 4 core security workflows: PDF encryption, e-signature proof requests, signature stamping, and verification envelopes.
• Anchored document hashes using Solidity and placed 3rd in a GovTech-hosted blockchain hackathon.

AI-Based Vehicle Speed Detection | 2026
Role: AI / Computer Vision Developer | Type: Detection, Tracking & Speed Estimation
• Developed a vehicle detection, tracking, and speed-estimation pipeline using YOLOv8/YOLOv9, SORT, PyTorch, and OpenCV.
• Worked with 688 images across 9 vehicle classes.

DevSecOps Lab | 2025
Role: Owner | Type: Cybersecurity / CI-CD Practice
• Created a DevSecOps lab repository to practice security-aware development and deployment workflows.
• Explored CI/CD, secure coding workflow concepts, and tool-based development practices.

GameFit AI | 2025
Role: Developer, UI/UX, Model Training | Type: Motion-Controlled Fitness Game
• Built a webcam-only motion-controlled fitness game using MediaPipe, OpenCV, and PyAutoGUI.
• Trained a motion-recognition model to detect 4 movements in real time with 95% accuracy.
• Released a web version and downloadable app, making active gaming more accessible.
• Selected as Best Project among 28 projects at college.

E-Commerce Sales Analysis | 2024
Role: Data Analyst | Type: Exploratory Data Analysis
• Analyzed sales and customer data and created visualizations using Pandas, NumPy, and Matplotlib.

Water Quality Prediction | 2024
Role: Machine Learning Developer | Type: Predictive Analytics
• Built a machine learning model to predict water potability from environmental data.

ACHIEVEMENTS

- 3rd Place - GovTech Blockchain Hackathon, for Sayig.
- Best Project Team - GameFit AI, selected among 28 projects.
- Academic Excellence Awards - Ugyen Academy, for strong performance during higher secondary studies.
- CodeMonkey Week Recognition - highest number of challenges solved in XI Arts A, Ugyen Academy.

CERTIFICATIONS

Cloud Foundations (Training Badge), AWS Academy | Oct 2025
- Gained a foundation in cloud computing, covering core AWS services such as compute, storage, databases, networking, and security, through 14 modules and 12 hands-on labs.

Introduction to Cybersecurity, Cisco Networking Academy | April 2025
- Learned the basics of cyber threats, attacks, and ways to protect data and networks, through 10 modules and 20 hours of coursework.

WHO/OpenWHO: Measles and Rubella Outbreak Preparedness and Response | 2023
- Completed training on outbreak preparedness, response coordination, and public-health readiness.

WHO/OpenWHO: Foresight Approaches in Global Public Health | 2023
- Covered future-oriented thinking and scenario approaches for global health planning.

WHO/OpenWHO: Promoting Oral Health in Primary Health Care Settings | 2023
- Focused on oral-health promotion and primary-care awareness.

OpenLearn: Supporting and Developing Resilience in Social Work | 2023
- Completed a 10-hour course on emotional resilience, supervision, reflection, and professional leadership.

LANGUAGES

- Dzongkha: Native proficiency
- English: Fluent
- French: Elementary proficiency
- Korean: Elementary proficiency

INTERESTS

- UI/UX Design
- Artificial Intelligence
- Cybersecurity
- Computer Vision
- Data Analytics
- Emerging Technologies

REFERENCES

Tashi Wangdi
Founder, Impact Hub Thimphu
Relationship: Internship host / supervisor
Email available upon request

Samten Wangmo
Assistant Lecturer, GCIT
Relationship: Java module tutor and project supervisor
Email available upon request