

Prabesh Aryal

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EDUCATION

Baku Engineering University, Azerbaijan

July 2026

Bachelors in Computer Engineering

Current GPA: 90.12/100

Kathmandu Model Secondary School, Nepal

December 2021

National Examinations Board

GPA: 3.08/4.0

COURSEWORK

Courses: Basics of Computer Engineering, Basics of Programming, Object-Oriented Programming, Data Structures & Algorithms, Web Systems & Technologies, Computer Architecture, Discrete Mathematics, Linear Algebra, Differential Equations, Calculus, Circuit Theory, Basics of Electronics, Engineering Economics, Principles of Entrepreneurship & Introduction to Business, Probability & Statistics, Physics

Awards: Azerbaijan Government Scholarship 2022

PUBLICATIONS

Algorithmic Bargaining: Usability, Challenges, and Market Implications in Dynamic Pricing Systems May 2025

| *Published in: Journal of Baku Engineering University (BEU), ISSN 2521-635X*

DOI: <https://doi.org/10.30546/09090.2025.01.1090>

Conducted research on dynamic pricing systems and interactive bidding algorithms, analyzing their usability, market implications, and societal impacts. Focused on e-commerce applications and algorithmic negotiation techniques. The study explored the ethical considerations, fairness, and transparency in pricing models, and examined potential consequences for competition and consumer welfare.

SKILLS

Languages: Python, C, C++, Java, JavaScript, C#, PHP, HTML, CSS, SQL, jQuery, \LaTeX

Frameworks: React, Redux, TypeScript, Node.js, Express.js, Material-UI, Django, Flask, D3.js

Cloud and DevOps: Google Cloud, AWS, Docker, Digital Ocean, Alibaba Cloud, Heroku, Vercel, Kubernetes, Docker

Design and Animation: Adobe XD, Figma, Photoshop, Inkscape, Canva, GIMP, Maya Animation, Blender

Video Editing and Effects: Adobe After Effects, Adobe Premiere Pro

Tools: Git/GitHub, Unix Shell, Webpack, VS Code, IntelliJ CLion/PyCharm/IDEA, Visual Studio, Powershell, Bash

AI/ML: PyTorch, TensorFlow, scikit-learn, YOLO, Hugging Face, Seaborn, Keras, FastAPI, Machine Learning Model Deployment, Data Preprocessing, Feature Engineering, Natural Language Processing (NLP), Neural Networks, Computer Vision, Speech-to-Text (STT), Text-to-Speech (TTS), Retrieval-Augmented Generation (RAG); Proficient with AI models (GPT, Claude, Gemini) & agents (Copilot, Cursor)

Databases: MySQL, SQLite, PostgreSQL, Microsoft SQL Server, Oracle Database, MongoDB, Redis, Firebase, DynamoDB, Cloud Storage Buckets, BigQuery

Libraries: pandas, NumPy, Matplotlib, Selenium, OpenCV, EasyOCR

PROJECTS

Music App - Complete Music Streaming Platform | *ASP.NET Core, SQL Server, MVC, Bootstrap* June 2025

- Developed a full-stack music streaming platform with ASP.NET Core, featuring music management, social interactions, and admin tools.
- Implemented JWT & Cookie-based authentication, role management, and RESTful APIs (50+ endpoints, 12+ DB models, 11+ API controllers).
- Designed a responsive frontend with MVC & Bootstrap (30+ Razor views, 7+ MVC controllers) and single-handedly built the enterprise-level application.

- AI/ML Projects** | *Java, Python, TensorFlow, SQLite, YOLOv8, OpenCV, EasyOCR, Flask* March 2024 - Nov. 2024
- Built a Female Health Tracker app (Java, TensorFlow, SQLite) with cycle logging, AI-period prediction, symptom tracking, and a Flask backend API.
 - Developed an AI system (Python, YOLOv8, OpenCV, EasyOCR) to detect vehicles/license plates from video, extract text, and overlay data for real-time tracking.
- DalbhatPowerBot** | *Telegram API, Playwright, BeautifulSoup, JSON, AIOHTTP, RapidAPI* Aug. 2022 – Present
- Created an automated Telegram bot for multimedia downloads, social media scraping, and Nepali utilities.
 - Integrated APIs and reverse-engineered platforms like Twitter, Reddit, TikTok, Instagram, and Facebook.
 - Enabled advanced downloading of photos, videos, and audio (up to 2GB) with yt-dlp and optimized pipelines.
 - Developed Nepali calendar, horoscope, dictionary, and stock market utilities using modular JSON storage.
 - Bypassed CAPTCHA and access restrictions to ensure 99% uptime and fast responses.

EXPERIENCE

Software, DevOps & Full-Stack Engineer | *Freelance Developer, Founder, and Designer* Oct. 2019 – Present

Engaged in diverse Python projects and web development, including advanced web applications, cloud computing, server management, and automation for several clients. Specialized in scraping, scripting, bot and chatbot creation, and full-stack development. Proficient in AI/ML, cybersecurity, and system administration, demonstrating expertise across various Python applications and solutions. Handled the complete lifecycle of website development, including designing, developing, and deploying for domains like **innovativecokrishi.com.np**, **drijayghimire.com**, **essencetreksnepal** and many more. Gained extensive experience in full-stack development, server management, and cloud deployment, utilizing technologies like **React**, **Next.js**, **Node.js**, **Python**, **Django**, **FastAPI**, and integrating **CI/CD pipelines**, **Docker**, **Kubernetes**, and **Terraform** to streamline deployments. Focused on automation, scalability, and security while delivering production-ready solutions with modern UI/UX interfaces.

Hacker Hero | *Content Creator* Aug. 2016 – July 2022

Specialized in video production, editing, and design. Gained proficiency in Adobe Suite and honed skills in YouTube content creation. Learned the intricacies of video editing, scripting, and audience engagement. Achieved a significant milestone by earning my first income at the age of 19 through creating and posting video content.

Volunteering & Nepali Startups | *Contributor and Volunteer* 2019 – 2022

Contributed to several Nepali startups, including **Clamphook**, an EdTech platform, where I engaged in various development and organizational roles. Volunteered in diverse initiatives such as **Nepal Scouts**, **Mathematics Initiatives in Nepal**, and **Students Reunion**, showcasing a strong commitment to community development and youth engagement.

LEADERSHIP & ACTIVITIES

International Students' Club of Baku Engineering Uni. | *Board Member / Acting VP* Feb. 2023 – Present

Progressed from Social Media Manager (2nd Semester) to Acting VP (6th Semester), now managing all club operations with full rights. Spearheaded event organization, strategic communications, and international student guidance, fostering a dynamic and supportive community.

Class Representative/Captain | *Horizon G.B.S. School, Kathmandu Model Secondary School* 2013 – 2021

Served as the Class Representative, recognized as one of the best CRs for effective leadership, communication, and coordination between students and teachers. Managed class activities, resolved conflicts, and ensured smooth communication between the class and school administration.

INTERESTS AND AWARDS

Interests: Physics, Quantum Science, Cryptography, Evolution, Mathematics, Geopolitics, History
Languages: Nepali (Native), English (Proficient), Hindi (Proficient), Azerbaijani (Beginner)
Soft Skills: Leadership, Communication, Problem-Solving, Teamwork, Critical Thinking, Adaptability