Badal Tripathi

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EDUCATION

IOE, Paschimanchal Campus   Pokhara, Nepal
Bachelor of Computer Engineering   *Nov 17, 2017 – May, 2022*

Motherland Secondary School   Pokhara, Nepal
+2 High School Science   *2015 – 2017*

EDUCATION SCHOLARSHIPS

- B.E. funded by Government of Nepal

  - Ranked 261st in the engineering entrance exam, competing with 15,000+ candidates, and received a full scholarship for undergraduate study.

- Ranked 2nd in the high-school level entrance exam, competing with all the candidates from the Western Region, and received a full scholarship for high school.

EXPERIENCE

AI Engineer   Oct. 2022 – Present
TriCode Technology   *Sanepa, Lalitpur*

- Data preprocessing, integration of machine learning models into IoT systems for predictive analytics, anomaly detection, decision-making, and some NLP projects.
- I was also tasked to create a video speed controller that skips through silent parts. Used NLP algorithms in some projects to shorten video lectures, identify key moments of the video, and generate assisting elements such as summary and PowerPoint presentations if applicable.
- Applied version control systems like Git to manage code repositories, facilitating collaborative software development
- Worked closely with databases (SQL) to design optimized schemas and queries, showcasing a strong grasp of data management principles

Research Experience   May. 2022 – Aug 2022
Challenges for Nepalese primary school students — Article

- Conducted user research to understand the biggest pain points for primary school students in Nepal.
- We prepared a list of questions and did interviews with students, teachers, and their parents.
- We found that parents' education level significantly affects grades 1–5 students, while parental participation is crucial for grades 6–10

Executive Member   2019 – 2021
Innovative Computer Engineering Society   *Pokhara, Nepal*

- Worked as an executive member of the Innovative Computer Engineering Society under the Department of Computer Engineering, where we helped organize different technical programs, training, and conferences with my seniors and mentors from different institutional and technical organizations to the students of Paschimanchal Campus.

TEACHING EXPERIENCE

High School Teacher   April. 2021 – Oct 2022
Motherland Secondary School   *Pokhara, Nepal*

- Taught Computer Science and Mathematics to grade 11 and 12 students.

Participation and Achievements

- Gold Award: Won 1st prize for Vector Codecamp, 2019 as a team leader. We made a portable Electrocardiogram device that helps to measure the arrhythmic activity of the heart on the go.

- Code with Coffee: 3rd position secured among 38 teams organized by ICES(Innovative Computer Engineering Society), It is a two-day light competitive coding contest where a set of challenging coding problems are solved.

- Winter School in AI: Participated in 11day AI workshop organized by NAAMI (Nepal Applied Mathematics and Informatics Institute for Research)

- HULT prize: Reached the HULT prize competition campus finals three times. We presented a viable one-stop solution to deliver fresh green groceries from the farm to the doorstep of customers within a 24-hour timeframe.

- Achieving 2nd position in Eco-Friendly Project Competition in 2nd International Nature Summit-2016, Dhaka.

- Won Western Regional High-School Level Mathematics Competition.

- Won Western Regional School level Mathematics Competition.

Projects

Pixel to Plate: Recipe from Food Image | *Code*, *Article*

Some NLP Projects | *Code*

Audio Based Nepali Political Figure Recognition | Article

Predictive Analysis for Nabil Bank Stock Prices | Article

Automated Musical Tune Composition | *Code*, *Article*, *Demo*

Intelligent Slide Generation from Lecture Videos | *Code*, *Article*

Playback Speed Adjustment skip silence or less crucial portions of a video | *Code*, *Article*

Twitter Sentiment Analysis | *Code*

Project for Data Mining Class | *Code*

TurboTuring C Accelerated Turing Machine Simulator | *Code*, *Article*

Traveling Salesman Problem application to Home Delivery Management System | *Code*, *Article*

Tic-Tac-Toe with min-max algorithm | *Code*, *Article*

Snake with Advanced Data Structures and OOP Principles | *Code*, *Article*

Simple GUI Application for Generating Context Free Grammar from DFA | *Code*

An Interactive OpenGL Based Flight Simulation Game | *Code*, *Article*

C implementation of the DFA-NFA and e-NFA | *Code*, *Article*

Linked-List based Music-Player | *Code*, *Article*

A Turing Machine Simulator Project | *Code*

Technical Skills

Languages: Python, C/C++, SQL , JavaScript
ML Libraries/Frameworks: sklearn, Scipy, NumPy, Pandas, PyTorch, Tensorflow
BigData+Database: AWS EC2, Docker, MongoDB