

Neeraj Adhikari

PERSONAL INFORMATION

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CITIZEN OF: Nepal

EDUCATION

2019-2021 Master of Science in COMPUTER SCIENCE
University of Rhode Island, Kingston, RI, USA
Current GPA 4.0
Courses Taken: *Programming Language Fundamentals, Machine Learning, Deep Learning and Neural Networks, (Graduate) Linear Algebra, Mathematical Analysis of Algorithms, Computer Algebra Systems, Programming Language Implementation, Theory of Computation, Cryptology*

2012-2016 Bachelor of Engineering in COMPUTER ENGINEERING
Pulchowk Campus, Institute of Engineering Tribhuvan University, Lalitpur, Nepal
Percentage Score 72.2 % equivalent to GPA 3.0

ACADEMIC PROJECTS

2015-2016 Nepali Handwriting Recognizer (NHR)

4th year Major Project for Bachelor of Engineering Degree at Tribhuvan University

Description: A system for recognition of characters of Devanagari script from online handwriting input. The system takes handwriting input from touchscreen devices and attempts to produce text from it. Capable of using multiple machine learning techniques, including neural networks, support vector machines and k-nearest-neighbors.

Source repository: gitlab.com/nprs/nhr

Publication: Project Report Titled Real-Time Devanagari Handwriting Recognition

2021 Graph Theory Playground

Ongoing Masters Thesis Project

Description: A web-based pedagogical tool to facilitate the teaching of graph theory concepts and graph algorithms. In progress.

Source repository: github.com/nradk/gtpg

HOBBY PROJECTS

2019 7-Segment Digital Clock

Hobby Project

Description: A 7-segment display digital clock with alarm and timer functions using the Atmega328p microcontroller along with the DS1307 RTC chip.

Source repository: gitlab.com/hardware/digital-clock

WORK EXPERIENCE

Oct 2016 - Jun 2018 Software Engineer at Smart Ideas Pvt Ltd., Kathmandu, Nepal

Worked primarily on developing android applications and mobile games. Notable projects are *Ludo Pro - Hamro Games*, *Hamro Nepali Dictionary*, *Hamro Cards* and *Hamro Nepali Keyboard*, all of which are available at the Google Play Store. Worked focused on text processing, machine learning and distributed algorithms. Also worked on data modeling, database design, API design and project management.

Feb 2019 - Jul 2019 Machine Learning and AI Developer at 8Lab (Subsidiary of 8Square Infotrans), Kathmandu, Nepal

Worked primarily in the areas of computer vision and optical character recognition. Notable project was the detection, normalization and structured data extraction from Malaysian national identity cards.

R&D with Python and deployment in the Android Platform with the heavy lifting performed by native code written in C++.

Sep 2019-Present Teaching Assistant at URI Department of Computer Science and Statistics Assisted in the teaching of Applied Combinatorics for 3 semesters and of Algorithm Design and Analysis for 2 semesters. Taught Applied Combinatorics as the instructor of record in Fall 2020 to a class of 23 students.

Jul 2020 - Aug 2020, May 2021 - Present Software Engineer at URI VOTES URI VOTER OPERATIONS AND ELECTION SYSTEMS, Kingston, RI

Ported the codebase of BOOTH—a set of tools for processing and analyzing precinct voting data—from VBA to C#. Wrote scripts for parsing and processing of voting machine audit and log files. Currently working on improving the capabilities and quality of BOOTH.

LEADERSHIP ACTIVITIES

Sep 2019-May 2020 Served as a department representative to **URI GAU** (Graduate Assistants United).

Apr - Jul 2016 Served in the Managing Committee of the **Locus Technological Exhibition** at Institute of Engineering Pulchowk Campus in 2016, with the Role of Volunteer Manager to oversee student volunteers.

ACADEMIC AND RESEARCH INTERESTS

Design and Analysis of Algorithms, Programming Language Theory, Operating Systems, Computer Science and Math Pedagogy

PROGRAMMING LANGUAGES AND LIBRARIES

Proficient in C/C++, Java and Python. Experience in JavaScript, Typescript, (bash) shell scripting. Experience working with NumPy, Sycikit-learn, Pandas and PyTorch in Python, NodeJs in JavaScript, Android programming in Java.