

Pravesh Koirala

PERSONAL DATA

PHONE: +1(984)2984100
EMAIL: praveshkoirala@gmail.com
LINKEDIN: <https://np.linkedin.com/in/pravesh-koirala-7874808a>
RESEARCH IMPERATIVES: Natural Language Processing, Computational Analysis of Narratives, Misinformation and Manipulation, Statistical Learning

EDUCATION

- | | |
|---------------|--|
| ONGOING | Ph.D. In COMPUTER SCIENCE
Florida International University, Miami, FL
Major Courseworks: Operating Systems, Theory of Computation, Graduate AI, Analysis of Algorithms, Graduate Research |
| NOVEMBER 2017 | Master's Degree In COMPUTER SYSTEMS AND KNOWLEDGE ENGINEERING
Institute of Engineering, Pulchowk Campus, TU, Nepal
Major Coursework: Computer Systems, Knowledge Engineering, Algorithmic Mathematics, Operations Research, Neural Networks, Information Security and Audit, Cloud Computing, Image Processing, Natural Language Processing, Advanced Switching and Routing Networks |
| AUGUST 2014 | Bachelor's Degree In COMPUTER ENGINEERING
Institute of Engineering, Pulchowk Campus, TU, Nepal
Major Coursework: Theory of Computation, Data Structure and Algorithms, Operating System, Artificial Intelligence, Computer Organization and Architecture, Discrete Mathematics, Calculus, Data Mining, Speech-Processing, Big Data Technologies |

PUBLICATIONS

- | | |
|------|--|
| 2021 | NPVec1: Word Embeddings for Nepali - Construction and Evaluation
Koirala, Pravesh, and Nobal B. Niraula. "NPVec1: Word Embeddings for Nepali-Construction and Evaluation." Proceedings of the 6th Workshop on Representation Learning for NLP (Repl4NLP-2021). 2021. |
| 2018 | A Nepali Rule Based Stemmer and its performance on different NLP applications
Koirala, Pravesh, and Shakya, Aman. Proceedings of the 4th International IT Conference on ICT with Smart Computing and 9th National Students' Conference on Information Technology, (NaSCoIT 2018), Kathmandu, Nepal, ISSN No 2505-1075, pp. 16 (December 2018) |

WORK EXPERIENCE

- | | |
|-----------------------|--|
| AUG 2021
CURRENT | Graduate Assistant, COGNAC Laboratories, Florida Intl. University <ul style="list-style-type: none">• Studies prevalent theories on Narratives and its intersection to cognition, culture, media, defense, and etc. for Natural Language Understanding.• Researching on computational narrative techniques for analyzing the prevalence of misinformation and manipulation in mainstream media. |
| JUL 2018
AUG 2021 | Computer Engineer and Section Officier
Ministry of Communication and Information Technology, Nepal <ul style="list-style-type: none">• Worked on the development and implementation of the Digital Nepal Framework 2019• Team member of the National IT Emergency Response Team.• Worked in the IT Policy Development and Review as part of the IT Coordination and Management Section.• Represented Nepal in various International Forums including UN ITU, APT, ApCERT, etc. |
| NOV 2016
JUNE 2018 | Computer Engineer and Cyber Forensics Officer
Office of Controller of Certification, Nepal <ul style="list-style-type: none">• Analyzed mobile and desktop devices seized by law enforcement agencies for extracting relevant artifacts.• Conducted Cyber Security and Forensics workshops all over Nepal. |

OCT 2014 NOV 2016	Fullstack Developer nLocate, Hariharbhawan, Lalitpur <ul style="list-style-type: none"> Developed a DSL for analytics of the nLocate search engine. Developed and Maintained the code for aggregating, indexing, and querying artifacts using Elasticsearch. Worked on Customer Behavior Analytics. Developed the ticket reservation system (end to end) for nLocate App.
----------------------	--

ACADEMIC PROJECTS

COMPILER DESIGN (2014)	Rhee: A Nepali Object-Oriented Programming Language Rhee is a Nepali programming language, a first of its kind. It is a dynamically typed and a Turing-complete language that transpiles to python. It is intended to be an educational tool for introducing kids to programming at an early age in their native language.
SPEECH RECOGNITION (2013)	Text Independent Speaker Recognition using Hidden Markov Model and Vector Quantization Extracting the Mel Frequency Cepstrum Coefficients (MFCC) and quantizing them using VQ, a speaker recognition engine was made which used HMM trained by the Viterbi algorithm to identify the speakers.
ARTIFICIAL INT. (2012)	Agent Localization using Particle Filters Using particle filter method, an agent was trained to localize itself in an unknown environment.
OOP (C++) (2011)	3D Chess Developed a 3D-chess playing application using MinMax algorithm along with alpha beta pruning and a score-based static evaluation function.

TEACHING EXPERIENCE

RDBMS:	For undergraduate students. Course included Relational Algebra, SQL, Conceptual/Logical modelling, Query Optimization, Indexing and ORDBMS concepts using Postgresql.
CYBER SECURITY:	Conducted multiple sessions on Cyber Security and Hygiene for K-12 level as part of Ministry of Communication and IT's program.

PROFESSIONAL SKILLS

PROGRAMMING:	Python, R, C/C++, VB.NET
MACHINE LEARNING:	PyTorch, TorchText, Numpy, Scipy, Matplotlib, Scikit
DATABASE:	PostgreSQL, MySQL, ElasticSearch
WEB:	Django, JS/CSS/HTML5
SERVER TECH:	Nginx, Apache, Docker

AWARDS & SCHOLARSHIPS

2021	Full Scholarship and Stipend for PhD at Florida International University
2019	Scholar, International Visiter Leadership Program (IVLP), US Department of States
2015	Full Scholarship for Masters in Computer Systems and Knowledge Engineering
2010	Full Scholarship for Bachelors in Computer Engineering

REFERENCES

ACADEMIC SUPERVISOR	Dr. Mark A. Finlayson , markaf@fiu.edu Associate Professor and Head of COGNAC Laboratories, FIU
FORMER SUPERVISOR	Mr. Anil Kumar Dutta, anil.dutta@nepal.gov.np Joint Secretary, IT, Ministry of Communication and Information Technology
MENTOR	Dr. Nobal Niraula , nb.niraula@gmail.com Associate Technical Fellow, Boeing Research and Technology