SHAILESH BAHADUR PANDEY

UPDATED: APRIL 2007

DOB	MAY 29, 1981
GENDER	MALE
NATIONALITY	NEPALESE
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EDUCATION

[2000-2004] Nepal Engineering College (*nec*) Bhaktapur, Nepal

B.E. Computer Engineering, CGPA: 3.52/4.00, Rank: 5/78

WORK EXPERIENCE

[Apr 05-Mar 07] Nepal Engineering College , Changunarayan, Bhaktapur
Teaching Assistant, Department of Computer Engineering

[Apr 07-Till Date] Nepal Engineering College, Changunarayan, Bhaktapur
Junior Professor, Department of Computer Engineering

Responsibilities:

- Teaching Courses to Undergraduate Students
  Courses Taught:
  - C Programming (First Semester)
  - Network Programming (Eighth Semester)
  - Compiler Design (Elective I – Seventh Semester)
  - Artificial Intelligence (Elective II – Eighth Semester)
- Supervising & Monitoring Projects – Involved with Project Division at *nec*
  - Offer few projects every year to final year students.
  - Monitor the progress of third year computer engineering projects.
- Research Work at Center for Research in Social Defense Technology (CRSDT/*nec*)
  - Beside my general duties, I try to make time so that I can work on projects of CRSDT/*nec*.

RESEARCH INTERESTS

- Computational Linguistics
  I am interested in almost all aspects that goes into the development of a computational model for a language but my recent focus is on semantics and pragmatics. I also like to work on the development of computational systems for Nepali. Currently, I am the coordinator for *nec* working in collaboration with Madan Purashkar Pustakalaya (MPP) to develop "Statistical POS Tagger for Nepali."

- Artificial Intelligence
  I am interested in applying various learning algorithms like Back Propagation, Genetic Algorithm and Ant Algorithm to practical problems.

- Compiler Design
  I am interested in the use of Finite State Machines/Transducers for Robot control, Morphological Analysis etc.

PUBLICATIONS

1. S. Pandey, R. Shrestha, "Solving Maze Puzzles using Ant Algorithm" (Submitted: Asian Applied Computing Conference, *http://www.aacc.org.np/*)

2. S. Pandey, K. Sapkota, P. Shrestha, "Stochastic and Rule Based POS Tagger for Nepali", Presented at the 12th Himalayan Language Symposium, Kathmandu, Nepal, November 2006.

3. S. B. Pandey, Y. Raj, "Development of the Politeness Planner for a Psychiatric Disorder Classification System", in Proc. *Conference on Software, Knowledge, Information Management and Applications*, Chiang Mai, Thailand, December 2006, pp. 165-168.

   Abstract— Most of the existing medical diagnosis expert systems lack politeness features into it. Generally, politeness has been found to be a desirable pragmatic factor to enhance the effectiveness of human-machine communication. Specifically, for those expert systems designed for psychiatric diagnosis, impolite queries and comments can disrupt and may terminate the co-operation from the patients. In this paper, we have designed a politeness planner to be incorporated into a psychiatric disorder classification system that learns from the users' inputs and generate strategy based responses.

4. S. B. Pandey, K. Sapkota, L. Thapa, "Efficient Information Retrieval using Measures of Semantic Similarity", in Proc. *Conference on Software, Knowledge, Information Management and Applications*, Chiang Mai, Thailand, December 2006, pp. 94-98.

   Abstract— In this paper, we present a search engine framework using Google API that expands the user query based on similarity scores of each term of user's query. We calculated the semantic similarity of noun words to obtain the related concepts described by the search query using WordNet as knowledge source. Users query was replaced with concepts discovered from the similarity measures and fed to the Google search API that resulted in efficient document retrieval.

5. Shailesh B. Pandey, Yogesh Raj and Santa B. Basnet (2004), *Machine Translation of Programming (Artificial) Language into Natural Language*, Research Notes in Proceedings of Contemporary Issues in Nepalese Linguistics, ISBN 99946-57-

69-0, pp. 463-470.

***Abstract*—** We begin this paper by declaring our conviction that the translation of any formal/programming (artificial) language into a natural language and vice-versa is not only possible, but is actually desirable. This conviction is based on our notion of *appropriate* Information Technology systems where the systems do not intrinsically offer to a user the barriers to its accessibility i.e. the systems do not discriminate users on the *sole* basis of their knowledge of their formal/programming languages. These systems are adaptive in a sense that they shall have an in-built component called a *flexible translator*, which will translate the user's natural language inputs to a programming language and vice-versa. This paper is a tiny step towards the formulation of such a flexible translator.

RESEARCH GRANT

1. Grant #nec/063-1314 from Nepal Engineering College for the project "Robot Path Planning: Solving the Maze Problem using Ant Algorithm". September 2006 – January 2007.
   Recent: Paper submitted to Asian Applied Computing Conference (http://www.aacc.org.np/)

AWARDS/HONOURS RECEIVED

1. Appreciation for my Contribution to the Formulation, Construction and Testing of the Working Model of "Explosive Ordinance Disposal Robot – Generation II". Duration: March 25, 2005 – May 25, 2005.

2. Computer Science Award for Securing Highest Aggregate Marks in Data Structure & Algorithm, Data Base Management System and Simulation & Modeling, Fifth Semester, Nepal Engineering College

3. Fee Waiver for Excellence in Academic Performance (First, Fifth, Sixth and Seventh semester), Nepal Engineering College

4. Best Research Award for paper on "Visual Programming Paradigm", Sixth Semester, Nepal Engineering College

PARTICIPATION IN COMPETITIONS

1. RoboSoccer (2004), Organized by Institute of Engineering, Pulchowk, Nepal
   Main Responsibility: Programming for AT89c51 Microcontrollers
   Awards: Second Runners Up, Best Artistic Design

WORKSHOPS AND TRAININGS

1. One Day Workshop on Robotics (2006), Organized by Institute of Engineering, Nepal

2. One Day Workshop on e-governance, AACC-2005, Kathmandu, Nepal, Organized by United Nations University

3. One Day Workshop on Robotics (2004), Organized by Institute of Engineering, Nepal

4. Introductory Course on Linguistics (2004), Duration: Dec. 29, 2003 -Jan 5, 2004,

Instructor: Asst. Prof. Yogesh Raj, Venue: *nec*

REFERENCES

1. Asst. Prof. Yogesh Raj, Chief Research Officer (CRO), Center for Research in Social Defense Technology (CRSDT/*nec*)
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2. Prof. Sudarshan Karanjeet, Head of Department, Department of Computer Engineering, Nepal Engineering College
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3. Asst. Prof. Madhup Khatiwada, Head of Department, Department of Electrical & Electronics, Nepal Engineering College
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