Sohil L Shrestha

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EDUCATION

University of Texas at Arlington, Arlington, TX, USA   Fall 2017 – (Expected: 2022)
Ph.D. in **Computer Science**   Current GPA: - 4.0/4.0
Advisor: Dr. Christoph Csallner

Kathmandu University, Dhulikhel, Nepal   Sept 2012 - Nov 2016
Bachelor in **Computer Engineering**   CGPA: 3.85/4.0
Rank: 1st

WORK EXPERIENCE

Teaching/Research Assistant, Software Engineering Research Center (SERC) Lab.   Sept 2017 - Present
- Designing experiments, collecting data and analyzing results to validate a hypothesis.
- Grade homework and exams for Algorithms and Data Structure (CSE 5311)
- Prepare programming assignments
- Organize and lead review sessions about specific topics as requested by instructor

Associate Software Engineer, Verscend Technologies   Nov 2016 - May 2017
- Active member of Maintenance and Support Team to handle issues/ problems/bugs encountered by US Waltham Product Team in Medical Intelligence application.
- Actively track and perform root cause analysis of any new production issue
- Responsible of reducing the Vertica SQL Exception issues in the backlog of the team.
- Worked in Agile Methodologies to deliver hotfixes as well as other fixes in a biweekly fashion to the production.
- Communicate with Project Managers, QC and Engine Support Team during daily meetings.
- Maintain legacy code and implement new requirements in best possible way
- Strictly follow the coding standard during development using Sonar.

Software Engineer Intern, Verisk Information Technologies   June 2016-Nov 2016
- Developed web application using agile software development methodology to perform log analysis which was crucial to the daily task of maintenance and support team
- Worked on a scheduler to schedule tasks with Cron jobs
- Documented application and created manual for end users.

Public Relations/Content Manager, Explore Gadgets   2012 - Present
- Responsible for managing reputation of Explore Gadgets
- Evaluate opportunities for partnerships, sponsorships and advertising on an on-going basis.
- Engage audiences across various social media channels and communicate with stakeholders.
- Strategize and budget future goals of the channel involving research and development of new contents on the channel.

HONORS AND AWARDS
- NCell App Camp Tourism Category Winner   2015
- Merit Based Scholarship, Kathmandu University   2013, 2014, 2015, 2016
- Dean's list, School of Engineering, Kathmandu University   2013-2016

RELEVANT COURSEWORK

Machine Learning, Object Oriented Programming, Algorithms and Complexity, Data Structures, Software Engineering, Cloud Computing, Operating Systems, Database Design & Implementation, Statistics, Differential Equations & Linear Algebra, Computer Graphics, Data Analysis and Modeling

SKILLS

Proficient in: Java, Python, Spring, Vertica, RESTful API, SQL, JSON, Unit Testing (Junit, Mockito) and some experience in C++, C, Javascript, HTML, CSS

Technologies/Environments: Windows, Linux, MySQL, MSSQL, Jenkins, Tomcat, Git, and some experience in docker, AWS.

PUBLICATION AND PRESENTATIONS

PUBLICATIONS

Complementing machine learning classifiers via dynamic symbolic execution: "Human vs. bot generated" tweets. By **Sohil L. Shrestha**, Saroj Panda, and Christoph Csallner. Proc. 6th International Workshop on Realizing Artificial Intelligence Synergies in Software Engineering (RAISE), 2018.[pdf]

SLEMI: Equivalence modulo input (EMI) based mutation of CPS models for finding compiler bugs in Simulink. By Shafiul Azam Chowdhury, **Sohil L. Shrestha**, Taylor Johnson, and Christoph Csallner. In Proc. 42nd ACM/IEEE International Conference on Software Engineering (ICSE), Main Technical Track, ACM, May 2020.[pdf]

Demo: SLEMI: Finding Simulink compiler bugs through equivalence modulo input (EMI). By Shafiul Azam Chowdhury, **Sohil L. Shrestha**, Taylor Johnson, and Christoph Csallner. In Proc. 42nd ACM/IEEE International Conference on Software Engineering (ICSE), Demonstrations Track, ACM, May 2020.[pdf]

DeepFuzzSL: Generating models with deep learning to find bugs in the Simulink compiler. By **Sohil L. Shrestha**, Shafiul Azam Chowdhury, and Christoph Csallner. In Proc. 2nd Workshop on Deep Learning and Testing (DeepTest), ACM, May 2020.

Automatic generation of Simulink models to find bugs in a cyber-physical system tool chain using deep learning. By **Sohil L. Shrestha**. In Proc. 42nd ACM/IEEE International Conference on Software Engineering (ICSE), Student Research Competition (SRC), ACM, May 2020.

PRESENTATIONS

Presented paper, "Complementing machine learning classifiers via dynamic symbolic execution: "Human vs. bot generated" tweets" (RAISE 2018), Gothenburg, Sweden, May 2018.

LEADERSHIP EXPERIENCE

Organizing Committee Member, IT MEET 2014, Kathmandu University   2014
- Co-ordinate Software Competition event
- Promote the IT MEET event using flyers and social media
- Work with guest of honors, judges and participants to ensure all requests are met.

Volunteer EXPERIENCE
- **Student Volunteer**, SIGMOD 2018, Houston, TX
- **Student Volunteer**, SC 2018, Dallas, TX
- **Student Volunteer**, NeurIPS 2018, Montreal, Canada

COURSES AND CERTIFICATION
- **Machine Learning –** taught by Andrew Ng, Stanford University in Coursera.org
- **Data Science –** taught by John Hopkins University in Coursera.org
- **Natural Language Processing –** taught by Anna Potapenko, National Research University Higher School of Economics in Coursera.org
- **Neural Networks for Machine Learning –** taught by Geoffrey Hinton, University of Toronto in Coursera.org
- **Deep Learning Specialization –** taught Andrew Ng, DeepLearning.al in Coursera.org

References are available on request.