Talank Baral

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Research Interests

My research interests are in Software Engineering, with a focus on AI and Software Engineering, and Software Evolution. Recent topics include optimizing continuous development and analyzing runtime behaviors of software.

Publications

Talank Baral, Shanto Rahman, Bala Naren Chanumolu, Basak Balci, Tuna Tuncer, August Shi, and *ASE'23 [1]* Wing Lam. **"Optimizing Continuous Development By Detecting and Preventing Unnecessary Content Generation."** 38th Annual International Conference on Automated Software Engineering, pages 901–913, Kirchberg, Luxembourg, 2023. Acceptance rate: 21% (134/630)

Education

George Mason University — **Aug 2022 – Now**
PhD in Computer Science, CGPA: 3.97 — *Fairfax, VA, USA*

Pokhara University — **Aug 2015 – Aug 2019**
Bachelors in Software Engineering, CGPA: 3.67 — *Pokhara, Nepal*

Experience

George Mason University — **(Spring, Summer, and Fall) 2023, 2024**
Graduate Research Assistant — *Fairfax, VA, USA*
- Worked on research including the topic Continuous Integration and Software Testing, AI and Software Engineering

George Mason University — **Fall 2022**
Graduate Teaching Assistant — *Fairfax, VA, USA*
- Worked as a Graduate Teaching Assistant for the class CS262 (Introduction to Low-level Programming)

JankariTech — **Jan 2020 – Aug 2022**
Software Developer — *Pokhara, Nepal*
- Helped different customers of JankariTech set up test automation
- Worked with OwnCloud, a client of JankariTech. OwnCloud is a German software company that works on content collaboration software. At work, my primary task included setting up test automation, CI pipelines, and writing and maintaining tests for different services of OwnCloud

Technical Skills

Platforms:	Linux
Languages:	Java, Python, SQL, YAML
Frameworks:	JUnit, Maven
Tools:	Git, CI/CD

Grants and Awards

SIGSOFT CAPS Grant — **Aug 2023**
Awarded a travel reimbursement of $1,200.00 for ASE'23. Didn't accept the offer because of visa issues

Summer 2023 Research Award - George Mason University — **May 2023**
Awarded by the College of Engineering & Computing, Department of Computer Science

Notable Open-Source Contributions

pact-cplusplus
Resolved compilation issues in pact-cplusplus, with my fix included in version 0.1.0

International Dataset of Flaky Tests (IDoFT)
Contributed to the IDoFT by adding newly detected flaky tests to the dataset and fixing them

Several projects to optimize their CI builds
Submitted 25 PRs, 12 merged. Submitted for my ASE'23 paper, disabling generation of unnecessary directories in CI builds