Shristi Shrestha

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About me

Currently pursuing a **Ph.D. in Computer Science** with a primary focus on **enhancing user experience (UX) within the mobile app ecosystem**. My research projects involve applying **state-of-the-art natural language processing techniques (NLP), machine learning,** and **qualitative analysis**. I build research-driven systems that assist users in making app-related decisions and evaluate them using **prototyping** and **statistical analysis**. Currently, I am investigating **mobile app interface design strategies** that feed off human cognitive biases and harm end-users. I also have **two years of professional experience** in the engineering of **web and mobile applications** using **fast and highly productive frameworks and libraries** such as **Springboot** and **Next.js/React** (frontend), and, deploying full-fledged web applications in **AWS EC2** and **Google Firebase**.

Education

- **Ph.D. in Computer Science** — August 2022 - May 2026 *(expected)*
  Louisiana State University
  Baton Rouge, Louisiana, USA
- **Bachelor in Computer Engineering** — November 2015 - September 2019
  Pulchowk Campus, Tribhuwan University
  Lalitpur, Nepal

Publications

Generating Rate Features for Mobile Applications (★Best Presentation)
S. Shrestha and A. Mahmoud, International Conference on Mobile Software Engineering and Systems (MobileSoft), 2024.
Built a dynamic feature-based rating system for mobile app stores that aids users in their app-related (e.g. install) decisions.

Work Experience

- **Teaching Assistant** — LSU
  Lab Assistance (3 hr, 30 students) — *August-December, 2023*
  - **Introduction to Java Programming**: Aided first-year undergraduate computer students at LSU in navigating and problem-solving their laboratory assignments in Java programming language.
- **Sireto Technology** — Hybrid
  Software Developer (Full-time) — *Nov 2019 - July 2022*
  - **Bridging Art and Blockchain Technology**: Spearheaded the integration of digital art commerce with blockchain technology, enabling artists to monetize their creations through NFTs in the Cardano ecosystem. Successfully launched a fully functional marketplace within six months, optimizing the platform through continuous customer feedback to enhance user experience.
  - **Highly Customizable Form Builder**: Co-engineered a highly customizable form builder platform. At the time, our goal was to empower users in building long, tedious and multilevel forms with minimal cognitive efforts. To tackle the problem at development level, the form builder was created using reusable set of React functional hooks, dynamic loading, lazy-update strategy and Redux data store management. Example features include target demographics setting, data encryption at input-level, and easy-on-eyes driven styling options at field, section and page levels.
  - **Privacy-driven Video Profile Sharing App**: As an intern, co-created a mobile application in Flutter framework that allows secure and privacy-focused video profile sharing among potential business partners to verify there is a genuine collaboration among real people in the business.

Technical Skills

- **Programming Languages**: Python, Java, Kotlin, JavaScript (JS), SQL, C/C++, Bash, Dart
- **Frameworks & Tools**: SpringBoot, Next.js, React (library), Flutter (SDK), Figma, NLTK, Git
- **Cloud Technologies**: Firebase (Auth, Firestore, Functions, NextJS integration), AWS

Projects

- **Rate Features based App Rating System**: An improved version of Apple Appstore integrated with our proposed rate feature based rating system. Dec '24)
- **HumorMe - Find Your Funny Tribe**: A community space for comedians, aimed at providing a safe space for sharing their jokes and promoting their standup shows. (Sept '23)
- **Tutor Schedule Management**: A centralized schedule management system where students explore and schedule tutoring with their favorite tutors. Also, tutors manage their multiple schedules without conflict in a single unified place. (Jan '23)
- **Speaker Identification based on Sinc Filters**: A biometric-based authentication system built on a convolutional neural network (CNN) with sinc filters and trained on Nepali speakers. (July '19)
- **University Master Thesis Record Manager**: An admin-centered web application that stores hundreds of master thesis records and presents the summary of the records based on various criteria like subjects, scopes, and supervisor. (June '18)