

# BIBEK SHRESTHA

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## Education

<b>Ph.D. in Computer Science and Engineering</b> University of Nevada, Reno Coursework: Distributed Computing, algorithms, HPC & Networking, DBMS, OS, Reliability & Security of Comp. Sys., etc.	Aug 2019 – Current
<b>Bachelor's in Computer Engineering</b> Tribhuvan University, Kathmandu, Nepal	Nov 2011 – Oct 2015

## Professional Experience

<b>University of Nevada, Reno</b>	<b>Graduate Research Assistant</b>	Aug 2019 – Current
<ul style="list-style-type: none"><li>Perform research on SDN, Dataplane programming, Edge Computing in High Performance Computing &amp; Networking lab.</li><li><b>Reduced the task completion time by 30%</b> using In-band Network Telemetry to make scheduling decisions at the edge.</li></ul>		
<b>Kalysys (kalysys.com)</b>	<b>Full-Stack Developer</b>	Nov 2018 – May 2019
<ul style="list-style-type: none"><li>Engaged on the development of multi-tenant cloud-based CRM &amp; Business Management System for small businesses.</li><li>Helped the company grow from its first client to onboarding many clients on the platform.</li><li>Collaborated on backend architecture, API design, multi-tenant database design, and third-party services integrations.</li><li>Improved the <b>response time of the REST APIs by 25%</b> through query consolidation and leveraging caching.</li><li>Coordinated with the teams at Australia and Nepal to plan and execute the project. Mentored three interns.</li></ul>		
<b>LIS Nepal Pvt. Ltd (A Yomari Company)</b>	<b>Sr. Software Engineer</b>	Aug 2018 – Dec 2018
<ul style="list-style-type: none"><li>Directed the standardization of development stack, code reusability, automated CI/CD, and testing. This alleviated the complexity of bootstrapping new projects thereby reducing the <b>completion time of the newer projects by 10%</b>.</li><li>Led the integration of NEPSE Online Trading System (Online Stock Exchange System of Nepal) with major banks enabling online direct payments for the first time in the platform. This resulted in an increase in <b>user transactions by 20%</b>.</li></ul>		
<b>YCO Pvt. Ltd (A Yomari Company)</b>	<b>Software Engineer</b>	Nov 2015 – Aug 2018
<ul style="list-style-type: none"><li>Contributed to multiple high-impact projects that catered directly to the digitization of Nepal.</li><li>Worked on the development of Nepal's first and the only fully automated online stock exchange system. Average daily <b>turnover of NEPSE increased by more than 65%</b>. Commercial banks vying for the <b>broker license increased by 50%</b>.</li><li>Boosted the application processing <b>capacity of the Department of Tourism of Nepal by 40%</b> by eliminating the process bottlenecks through web-based business process automation.</li><li>Implemented service-oriented information exchange platform between select government agencies of Nepal. The amount of time spent by the general public to juggle between these agencies halved, improving the quality of service.</li><li>Coordinated with the teams in Nepal, India, and the US during various projects. Mentored two interns to land full-time positions. Also trained new hires.</li></ul>		

## Skills

**Languages:** Java, Python, JavaScript, C/C++

**Technical Skills:** AWS, Git, REST, JEE, Node.js, React, Angular, CSS, HTML5, Elasticsearch, Microservices, Socket/Network programming, multi-threaded programming, CUDA, RabbitMQ, Kafka, Redis, SQL, Jenkins, Docker

**Concepts:** Agile, Object-Oriented Design, Service-Oriented Architecture, client-server architecture

## Selected Projects

- Scheduler leveraging INT** improved data transfer time by factoring in network state at line rate. [Python, P4] [github](#)
- Distributed Fabric** A framework allowing users to write distributed applications. Framework exposes simple API so that users don't have to implement distributed computing themselves. [Python] [github](#)
- Imagine DB** A file based relational database system that supports simple SQL queries. [Python] [github](#)
- Java Serialization:** An annotation driven serialization and deserialization library [Java] [github](#)

## Publication / Scholarships

- INT Based Network-Aware Task Scheduling for Edge Computing, PAISE 2021.
- Recipient of graduate research scholarship at the University of Nevada, Reno.