

# BIBEK SHRESTHA

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## WORK EXPERIENCE

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**University of Nevada Reno, NV** — *Graduate Research Assistant* Aug 2019 — Current

- Performed research on SDN, data plane programming, edge computing in High-Performance Computing & Networking lab.
- Reduced the task completion time by ~30% using In-band Network Telemetry to make scheduling decisions at the edge.
- Technologies:** Python, C++, NS3, SDN, P4, Node.js, Socket Programming

**Kalysys.com, Australia** — *Full Stack Engineer* Nov 2018 — May 2019

- Helped the company grow from its first client to onboarding many clients in the cloud-based CRM platform for SMEs.
- Collaborated on backend architecture, API design, multi-tenant database design, and third-party services integrations.
- Improved the response time of the REST APIs by ~25% through query consolidation and leveraging caching.
- Technologies:** JavaScript (Node.js, React), Auth0, PostgreSQL, AWS, SCSS, REST

**LIS Nepal Pvt. Ltd, Nepal** — *Sr. Software Engineer* Aug 2018 — Dec 2018

- Helped in the standardization of development stack, code reusability, automated CI/CD, and testing. This alleviated the complexity of bootstrapping new projects, thereby significantly reducing the completion time of the new projects.
- 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. The total user transactions increased as a result.
- Technologies:** Java, Angular, Jenkins, REST

**YCO Pvt. Ltd, Nepal** — *Software Engineer* Nov 2015 — Aug 2018

- Contributed to multiple high-impact projects that catered to the digitization process of Nepal.
- Worked on the development of Nepal's first and the only fully automated online stock exchange system. The average daily turnover of NEPSE increased by more than 65%. Commercial banks vying for the broker license increased.
- Boosted the application processing capacity of the Department of Tourism of Nepal by eliminating the process bottlenecks through web-based business process automation.
- Implemented a 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 decreased, improving the quality of service.
- Coordinated with the teams in multiple regions. Mentored interns and trained new hires.
- Technologies:** Java, JEE, Nginx, Angular, CSS, RabbitMQ, Redis, Socket Programming, REST, MSSQL, ORM, WildFly, Jenkins

## SKILLS

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**Proficient:** Java, Python, JavaScript, SQL, RESTful API, Node.js, Express.js, TypeScript, Angular, CSS, HTML5, Git, Linux

**Intermediate:** C++, C, React, Redis, Elasticsearch, RabbitMQ, Kafka, ORM, PostgreSQL, AWS, Docker, Sockets, SDN, Jenkins

## EDUCATION

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**University of Nevada, Reno** — M.S. in Computer Science and Engineering Aug 2019 — Dec 2021 (Expected)

**Tribhuvan University, Nepal** — Bachelor's in Computer Engineering Nov 2011 — Oct 2015

## PROJECTS

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**Scheduler leveraging INT** — P4, Python, SDN

- Reduced the data transfer time by utilizing network state for making scheduling decisions at the edge.

**Distributed Fabric** — Python

- A framework allowing the users to write distributed applications in Python.
- Framework exposes simple API so that users don't have to implement elements of distributed computing themselves.

**Imagine DB** — Python

- Implemented a file-based relational database system that supports simple SQL queries.

## SCHOLARSHIPS / ACTIVITIES

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- Recipient of graduate research scholarship at the University of Nevada, Reno.
  - Recipient of Mahatma Gandhi Scholarship, which is awarded to the outstanding high school students in Nepal.
  - Member of the Nepalese Student Association (NSA) club at the University of Nevada, Reno.
  - Member of the RUMI club with the goal of promoting diversity at the University of Nevada, Reno.