

BIPLAB NEUPANE

Software Engineer

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Education

Bachelor of Computer Information Systems | Pokhara University, Lekhnath, Pokhara, Nepal

- Dean's List
- Ranked Overall 1st [3.96/4.00 GPA]

Research Interests

Software Engineering + AI

AI for Programming, AI-Assisted Debugging, Automated Code Reviews, Software Reliability, Performance Optimization, Scalable System Design

Work Experience

Software Engineer | Techzen Corporation Pvt. Ltd.

February 2023 - Present

- Designed and developed the system architecture, database schema, and workflows for Esewa Hotels, a hotel booking system like Booking.com, ensuring scalability and high performance. Built microservices to handle hotel listings, booking flows, and payment processing efficiently.
- Developed and deployed custom e-commerce platforms and business websites using Python (Django), Laravel, and JavaScript, ensuring secure transactions, optimized UI/UX, and seamless user experiences.
- Built RESTful APIs for hotel booking systems, payment gateways, and third-party integrations, ensuring secure and high-performance data exchanges.
- Implemented automated and manual testing to identify and fix critical issues in APIs and web applications, ensuring bug-free deployments and high system reliability.
- Managed and optimized SQL databases (MySQL, PostgreSQL) for handling large-scale transactions. Ensured efficient query execution and indexing for high-speed data retrieval.
- Administered DNS configurations, server deployments, and infrastructure management, ensuring high availability and performance. Worked with cPanel, Nginx, and cloud services to optimize hosting environments.
- Used Git for code versioning, team collaboration, and continuous integration to maintain clean and efficient codebases.
- Participated in daily stand-ups, sprint planning, and feature reviews, contributing to fast-paced development cycles and continuous product improvements.

Software Developer| Sarvanam Software Pvt. Ltd.

January 2022 - January 2023

- Developed and maintained web applications for the hospitality sector, including hotel booking systems and integrations with Property Management Systems (PMS).
- Designed and optimized relational database schemas, wrote complex SQL queries, and managed data migrations to ensure efficiency and scalability.
- Built and deployed RESTful APIs using Laravel and Python to support booking engines, payment systems, and third-party integrations.
- Worked extensively on frontend and backend development, implementing responsive user interfaces using Vue.js and Blade templating.
- Integrated third-party services such as payment gateways and social media APIs to enhance system functionality.
- Focused on performance optimization, improving database queries and backend processing for faster response times.
- Managed hosting environments using cPanel and HeartInternet, handling deployments, DNS configurations, and server optimizations.
- Conducted thorough testing, including unit testing, API testing, and debugging, to maintain system reliability.
- Followed Agile methodologies, actively participating in sprint planning, daily stand-ups, and code reviews to ensure efficient development cycles.

Software Developer Internship| Start Technology Pvt. Ltd.

November 2021 - April 2022

- Worked on developing and deploying websites and news portals using Laravel and Django.
- Built dynamic and responsive web applications, ensuring cross-browser compatibility and optimized performance.
- Designed and implemented database schemas for various projects, managing relational data using MySQL.
- Developed backend functionalities, including authentication, content management, and API integrations.
- Assisted in frontend development using JavaScript and Blade templating, improving user experience and interface design.
- Managed hosting environments using cPanel, handling deployments, domain configurations, and server maintenance.
- Gained experience in debugging, testing, and optimizing web applications to ensure reliability and efficiency.
- Collaborated with senior developers, gaining hands-on experience in full-stack development and best coding practices.

Projects

Esewa Hotels

Designed and developed the system architecture, database flows, and microservice workflows to ensure seamless hotel booking and transaction processing. Implemented APIs to manage real-time availability, pricing, and secure payment gateway integration. Managed server deployments, DNS configurations, and cloud infrastructure to optimize performance and security. Conducted API testing, performance optimization, and debugging to ensure system reliability and scalability.

Automated Bug Removal

AI-Powered Bug Fixer (BugRemoval) is an automated tool designed to improve code quality by leveraging AI-driven debugging and continuous integration. It scans Python repositories using Flake8 to detect linting errors, utilizes GPT-3.5-Turbo to generate intelligent fixes, and automatically commits the corrected code via GitHub Actions. The system runs daily, ensuring continuous improvement without manual intervention. By integrating AI with automated debugging and code reviews, this project showcases my expertise in software automation, AI-driven development, and CI/CD workflows.

Ecommerce Projects

Built e-commerce platforms with secure payment processing, product management systems, and intuitive user interfaces. Designed and implemented microservices architecture to ensure scalability and efficient system operations. Integrated third-party APIs for shipping and payment, optimizing order management processes. Focused on performance tuning and query optimizations to enhance transaction speed and system responsiveness.

Booking Engines

Developed custom booking systems for clients in the hospitality sector, focusing on real-time availability, automated scheduling, and seamless third-party API integrations. Designed and optimized database queries for better performance and responsiveness. Implemented security measures to protect transactions and user data while ensuring a smooth booking experience.

College Management System(Final Year Undergraduate Project)

Developed a full-fledged college management system, successfully deployed for administrative use. Built student and faculty management modules, optimizing database structures for efficient data retrieval and streamlined operations. Implemented role-based authentication and an interactive dashboard for improved user experience. Authored a detailed project report analyzing system impact, scalability, and long-term usability.

Skills and Specialization

Programming Languages

- Python
- C
- JavaScript/TypeScript
- PHP
- HTML5/CSS3

Frontend Development

- Responsive Web Design
- Bootstrap / Tailwind
- SASS/SCSS
- RESTful API Integration
- Component-Driven Architecture

Database Management

- MySQL
- PostgreSQL
- MongoDB
- Database Design and Normalization

Backend Development

- RESTful Services
- MVC Architecture
- Microservice Architecture
- Authentication & Authorization (JWT, OAuth 2.0)

CI/CD and Automation

- GitHub Actions
- Workflow Automation

AI & Automation

- GPT-3.5-Turbo
- OpenAI API
- GitHub Actions

Tools & IDEs

- VS Code
- Postman
- PyCharm
- Jupyter
- Github Desktop
- ngrok

Debugging Tools

- Flake8
- Autopep8
- Black
- Static Code Analysis
- API Debugging

Testing

- Unit & Integration Testing: PyTest, PHPUnit
- API Testing
- Performance Testing

Version Control

- Git
- GitHub

Frameworks & Libraries

- jQuery
- Vue.js
- Angular
- Next.js
- Django
- Laravel

Cloud Hosting & Web Infrastructure

- Web Hosting Management (HeartInternet, Hostinger, cPanel)
- Domain Management (DNS, SSL, Emails)
- Server Administration (Nginx Configuration, Reverse Proxy, Performance Tuning)
- Cloud Services (AWS Hosting, Deployment, Scalability)
- Load Balancing & Performance Optimization (Nginx Caching, SSL Termination, AWS Scaling)
- Security & Monitoring (Firewall , SSL Certificates)

Interpersonal Skills

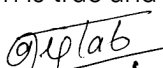
- Communication skill
- Leadership
- Team working capabilities
- Problem solving and decision-making

Other Skills

- Agile/Scrum Methodologies
- Code Reviews / Pair Programming
- Problem Solving and Debugging
- Cross-Platform Development
- API Design and Documentation

Declaration

"I hereby declare that the above information is true and correct to the best of my knowledge and belief."


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Biplab Neupane