JULESH SHRESTHA

Backend Developer

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• Kathmandu

Profile

Experienced and dedicated back-end developer with a solid background in API development, database management, AI development and cloud computing. Proven track record of delivering scalable, robust, and secure applications for both startups and established businesses. Eager to contribute to dynamic development teams and work on challenging projects to drive organizational success.

Experience

Freelance Developer
07/2022 - Present

- Worked closely with a dynamic team to gather requirements, design ETL, and implement a PSA card data fetching pipeline Python, MySQL, aiohttp, asyncio
- Successfully completed project on portfolio management systems, data processing systems, and cloud-integrated applications in Nest.js, PostgreSQL, React.js.
- Designed and developed a simple portfolio website for a school using Node.js, React.js and MySQL.
- Delivered back-end solutions for a prototype of a bike sharing startup, primarily focusing on API development and database design

Software Engineer
Terakoya Academia
05/2021 - 10/2021

- Worked on maintaining and enhancing company websites using React.js on the front-end, Django on the back-end, and MySQL as the database.
- Developed a plugin for Spotify's Backstage platform in TypeScript, allowing users to search GitHub and GitLab repositories by custom parameters.
- Addressed PeerTube's HTTP request issues by enabling corporate proxy support, using Node.js and integrating env-smart and hpagent packages for proxy handling.
- Collaborated in the development of the company's internal tools, improving efficiency in daily operations.

Web Development Intern
BeatsBit IT Solutions
08/2020 - 11/2020

- Developed foundational web development skills, working with HTML, CSS, JavaScript, and Node.js to develop scalable web applications.
- Gained experience in backend technologies like Node.js and MongoDB for building and managing databases for web applications.

Key Projects

PSA Data Fetcher and Processor (Python)

- Designed and implemented an ETL process to fetch PSA card and population data from a public API and store it in a MySQL database
- Applied Slowly Changing Dimensions (SCD) Type II methodology for updating and merging new records.Built concurrency and asynchronous data fetching using aiohttp and asyncio to handle large datasets efficiently.
- Integrated detailed logging and email notifications for the success or failure of the ETL process.

Portfolio Management System (NestJS, PostgreSQL, TypeORM)

- Developed a full-stack portfolio management system that allowed users to manage their financial portfolios, track stocks, and plan investments, using a subscription-based model.
- Involved in the project from the beginning, handling business requirements, project planning, database design, and API development using NestJS, PostgreSQL, TypeORM, Redis, Socket.io.

GitHub/GitLab Repository Plugin (Node.js, TypeScript)

- Developed a plugin for Spotify's Backstage platform, enabling users to search GitHub and GitLab repositories based on custom search parameters using Node.js and TypeScript.
- Integrated the GitHub and GitLab APIs for seamless data fetching and filtering.

PeerTube Proxy Module (Node.js)

- Solved an issue with PeerTube 3.2.x by enabling HTTP and HTTPS proxy support.
- Implemented a middleware in Node.js that fetched proxy configuration from system environment variables, config files, and .env files, improving network security and compliance with corporate proxies.

Skills

JavaScript · Typescript · Python · C/C++ · HTML · CSS · NodeJS · Express.js · NestJS · KoaJS · React.js · Django · MySQL · PostgreSQL · MongoDB · Socket.io · Redis · JWT Auth · AWS (EC2, S3, Route53, Elastic Search, Sagemaker) · Cloudways · Docker · Nginx · TensorFlow · Keras · Numpy · Pandas · SciPy · Scikit Learn · Matplotlib · OpenCV · Streamlit · Kaggle · Google Colab · Deep Learning · computer vison · Git · JIRA · Visual Studio Code · PyCharm · Anaconda Navigator

RESTful API Development · GraphQL API Development · Microservices Architecture · Unit Testing · Data Annotation and Preprocessing

Strong problem-solving abilities · Effective communication skills · Team collaboration and teamwork · Adaptability and willingness to learn · Project management and organization skills

Education

Kathmandu University
Panchkhal, Kavre
12/2021 - 02/2024

MTech. Artificial Intelligence

- **Thesis**: *Wilms Tumor Segmentation using Deep Neural Networks*
- Explored and compared deep learning models (UNet, Deeplabv3, Segformer) for segmenting Wilms tumors from CT images.
- Best Model: UNET with Validation Pixel Accuracy: 99.60%, Validation IoU: 94.51%, Validation Dice Score: 97.18%
- Utilized over 10,000 CT images from the TCIA dataset

Kathmandu University
Dhulikhel, Kavre
08/2016 - 12/2020

BSc. Computer Science

- **Final Year Project:** *Age and Gender Classification from Facial Images*
- Developed a system for age and gender classification using the VGG model focusing on handling limited datasets
- Achieved 96.29% gender prediction accuracy and 24% age prediction accuracy using WIKI dataset images

Interests

| ◈ Web Development | ◈ AI Development | ◈ Music |
| ◈ Travel | ◈ E-sports | |