Pushpesh Gokul Pant

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EDUCATION

- **Shri Mata Vaishno Devi University** — Katra, India
  Bachelor of Technology - Computer Science; *July 2020 - July 2024*
  Courses: *Operating Systems, Data Structures, Analysis Of Algorithms, Artificial Intelligence, Machine Learning, Computer Network and Security, Database Management systems, Nature Inspired Algorithms, Digital Image Processing, High-Performance Computing*

SKILLS SUMMARY

- **Languages:** Python, Bash, C++, JavaScript, SQL
- **Frameworks:** Django, FastAPI, Pytorch, Scikit, TensorFlow, NLTK, SpaCy, Keras, OpenCV, Tableau
- **Tools:** Docker, PostgreSQL, MongoDB, MySQL, GIT, GitHub Actions, Websocket
- **Platforms:** Linux, Windows, AWS, GCP, Azure
- **Soft Skills:** Leadership, Teamwork, Cooperation, Problem-Solving, Adaptability, Critical Thinking, Time Management, Communication, Management, Focused, Analytics

EXPERIENCE

- **SMVDU Research Project** — On site
  Intern Programmer *Feb 2023 - Present*
  - **Developed Solutions**: Designed, implemented, and optimized deep learning models using advanced machine-learning techniques and frameworks, Ensemble models. Calculated different metrics and modified preprocessing steps.
  - **Collaborated in Research Initiatives**: Understanding SOTA papers and contributing to algorithm design and implementation. Collaboration for the development of novel algorithms for image processing and analysis.
  - **Experimentation and Optimization**: Conducted rigorous analysis, experimentation, and meticulously fine-tuning hyperparameters and architectures to attain state-of-the-art performance levels.
  - **Comprehensive Documentation**: Documented Code, Methodologies, and experimental outcomes through Tensorboard and W&B . Ensured code reproducibility and streamlined knowledge sharing among team members.

PROJECTS

- **Flare Removal (Computer Vision, Image Segmentation)**: Implementation of Google's Research on the removal of flare, improved and compared with different methodologies, implemented custom loss function, integrated the model with API, shipped with Docker, also used gradio for a showcase in hugging face spaces. Tech: Pytorch, sklearn, Fastapi, matplotlib, Docker, Gradio.
- **Food Classification using Vision Transformer (Transformers, Deep Learning, Computer Vision)**: Recreated and implemented Vision Transformer Research Paper to classify different types of images into food classes, comparison with other classification models. Tech: PyTorch, sklearn, matplotlib, Tensorboard .
- **Lead Gecko (Web Development)**: created a web app for small vendors where they can keep track of their orders, perform CRUD operations, and can do the same through API of it, a personalized dashboard for every user. Tech: Django, Rest API, Google Auth, Sqlite3 .
- **Face Detection (Computer Vision, GUI)**: Face detection on group photo to mark attendance at once and update it to Excel file using User Interface, choosing best algorithms for face detection and face identification. Tech: Python, Dlib, OpenCV, tkinter .

PUBLICATIONS

- **Journal: based on a novel method for classification**: manuscript is currently submitted for publication

HONORS AND AWARDS

- Presented my project at 25th National Conference on e-Governance, November 2022
- Global Rank-27, Codechef Cook-Off 2021 Division 3, December 2021

OPEN SOURCE CONTRIBUTION

- **GSSOC-23** — Remote
  Contributor *May 2023 - Aug 2023*
  - **Python and ML Projects**: Actively contributing to various Python and Machine Learning open-source projects. Demonstrated proficiency in coding, problem-solving, and code reviews and improvements in the projects' codebases.
- **Python - Argentina** — Remote
  Developer
  - **Educational Platform Enhancement**: Designed and implemented a dynamic Question and Answer format, enhancing the interactivity and effectiveness of the platform's learning resources.