Prajjwal Pandey

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Education

- **Bachelors Degree in Computer Engineering** **2021-Present**
  Pulchowk Campus, Tribhuvan University, Lalitpur, Nepal
- **School Leaving Certificate** **2019**
  Kathmandu Model College, Kathmandu, Nepal

Work Experience

- **Director of Research and Development** **2025-Present**
  SEDS Pulchowk, Lalitpur, Nepal
- **Research Coordinator** **2023-2025**
  SEDS Pulchowk, Lalitpur, Nepal
- **Graphic Designer and Developer** **2022-2024**
  LOCUS, Nepal

Skills

- **Programming** Python, C/C++
- **Machine Learning** Scikit-learn, TensorFlow, PyTorch
- **Cloud and Data** AWS, NumPy, Pandas, Matplotlib
- **Database Management System** SQL, MongoDB.
- **Deployment** Docker, Django—Fastapi
- **Technical Knowledge** Git, Linux, Apache Spark, Hadoop, Streamlit, Excel, Latex, HMTL—CSS—JS React, Adobe Illustrator—Figma.

Projects

- **Timber Transfer with DDSP** **Major Project, Pulchowk Campus**
  Developing an advanced system to transfer music style i.e. any sound input gives the output of harmonics of sarangi. The system is trained on 25 mins of sarangi where the auto-encoder learns the features of sarangi.
- **Breeding Giant rats** **Genetic Algorithm**
  Genetic Algorithms (GAs) are optimization and search techniques inspired by the principles of natural evolution and genetics. They are used to solve complex optimization and search problems where traditional methods struggle or are inefficient. Here I used genetic algorithm to breed a race of super rats that can terrorize the world. I mean, ofcourse a 50kg giant rat would look scary, wouldn't it?
- **Are We Alone?** **Exploring The Fermi Paradox**
  Scientists use the Drake Equation to estimate the possible number of civilizations in the galaxy currently producing electromagnetic emissions, such as radio waves. In 2017, the equation was updated to account for new exoplanet discoveries by NASA's Kepler satellite.For a given number of advanced galactic civilizations and an average radio bubble size, estimate the probability of any civilization detecting the radio transmissions of any other civilization. For Perspective, posting the Earth's current radio bubble on a 2D graphical representaion of the Milky Way.
- **HostelHUB** **Minor Project, Pulchowk Campus**
  MERN Stack Project that supports the Pulchowk Campus Boys Hostel administration and management.
- **Assigned Projects** **Syllabus**
  Hospital Management System(C Programming). Brick Breaker(C++ Game), (Data Structure and Tree Visualization in C++), (Final Year Project Management, MERN Stack Project), (Self Organizing Map, AI Project), (University Network Cisco Packet Project)

Certifications

- **Machine Learning** **DeepLearning.AI Stanford University**
  Built and trained supervised models (linear logistic regression) using NumPy scikit-learn. Developed multi-class classification neural networks with TensorFlow and implemented decision trees ensemble methods. Applied best practices in ML development, clustering, anomaly detection, and recommender systems (collaborative filtering deep learning). Explored deep reinforcement learning models.
- **AWS Data Engineering, AWS Academy Cloud Foundations**
  Practicing AWS Academy Data Engineering certification with hands-on experience in building end-to-end data pipelines and implementing AWS tools for data collection, storage, and analysis. Gained practical expertise in preparing data for ML applications through real-world use cases, with focus on developing scalable data engineering solutions in cloud infrastructure.
- **Applied Data Science, WorldQuant University**
  Practicing an intensive data science lab covering end-to-end machine learning pipeline from database management to predictive modeling, with hands-on experience in SQL/NoSQL databases and regression/classification algorithms. Gained expertise in data preprocessing, visualization techniques, and applying ML solutions to business problems while incorporating ethical AI practices. This comprehensive training provides practical exposure to both technical implementation and business application of machine learning systems.
- **Applied AI Lab: Deep Learning for Computer Vision, WorldQuant University**
  Practicing advanced deep learning certification covering full lifecycle of AI projects, including neural network architecture, model deployment, and computer vision applications with hands-on debugging experience. Gaining comprehensive understanding of AI ethics, sustainability in deep learning, and industry best practices while developing practical skills in transforming real-world challenges into implementable ML solutions.

Awards and Achievements

- **All Nepal Rank 11**, IOE Entrance Examination **2019**
- **Mahatma Gandhi Scholarship**, Indian Embassy **2017-18**

Accomplishments

- Mentor at Children in Technology Initiative "LOCUS 2025" **2024**
- Instructor at "LOCUS Software Fellowship 2025" **2024**
- **LOCUS CUP Coordinator** of LOCUS 2023 and 2024, Nepal **2023-24**
- **Design Chief** of LOCUS 2024, Nepal **2023-2024**
- **Secretary** of GAP Student Society, Pulchowk Campus, Nepal **2023-2024**
- Author of Pre-Engineering Entrance Book, BEATS Engineering, Nepal **2020**
- Assisted Professors of Rectified Chemistry Grade 12 Book, in updating the syllabus **2020**
- **President** of Boys Scout, New Horizon Higher Secondary School, Nepal **2016-2017**