

Bhupender Bindal

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04-04-1994

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github.com/bhupenderbindal

Skills

Programming	Python (Pandas, PyTorch, NumPy, Scikit-learn, Gradio), Java, SQL
Miscellaneous	Linux, Shell (Bash), Docker, Huggingface, Microsoft Office, Git and GitHub, Make, Yaml and LaTeX (Overleaf)
Soft Skills	Teamwork, Problem-solving, Documentation, Engaging Presentation
Language	English: Professional proficiency (IELTS 7.5), Deutsch: Limited proficiency (DSH 1), Hindi: Native proficiency

Personal Profile

A master's student of the Computational Sciences in Engineering course at TU Braunschweig with a keen interest in data science and programming. Possesses experience in data science and programming acquired through engagement in Studienarbeit, HiWi positions, personal projects and courses. Eager to apply data science and software skills to innovative projects in a professional environment.

Relevant Experience

Physikalisch-Technische Bundesanstalt (PTB)

Braunschweig, Germany

HiWi student

June 2022 - April 2023

- Project: Sample tip distance control in Atomic Force Microscope (AFM) simulation using AI controller
- Implemented features including training data augmentation, prioritized experience play and dueling network outlined in the improvement in Deep Q-Network research paper
- Streamlined repeated training and storage of training and test results and the related graphs
- Assessed the repeatability and reproducibility of the methodology
- Created preliminary project documentation using Sphinx

University Projects

Studienarbeit: Multi-view classification of chloroplast cells

Braunschweig, Germany

Technische Universität Braunschweig

May 2023 - August 2023

- Implemented Multi-view Convolutional Neural Networks using PyTorch and Lightning libraries to classify microscope-scale images of chloroplast cells
- Conducted training for both multi-view and single-view methods on simulated data and logging the experimentation with tensorboard
- Assessed performance of trained models on simulated data and real-world scenario data
- Analysed and deliberated on the potential constraints like sampling bias and data leakage and possible limitations of the approach in real-world situations
- Containerised the application using Docker for inference and hosted it as a web application on Huggingface

Personal Projects

Geographical map representation showcasing data about winners of the 2019 Lok Sabha elections

Braunschweig, Germany

Technische Universität Braunschweig

August 2023

- Developed an interactive visualization of information about the winners of the 2019 Lok Sabha elections on the geographical map
- Scraped the required data from two websites and performed necessary data preprocessing for effective plotting
- Leveraged the Pydeck library to transform data into an interactive map visualization

Education

Technische Universität Braunschweig

Braunschweig, Germany

Masters in Computational Sciences and Engineering

October 2021 - Current

- Grade: 2.0 out of 4

Jamia Millia Islamia University

New Delhi, India

Bachelor of Technology in Mechanical Engineering

July 2013 - June 2017

- Grade: 8.64 out of 10 (10 is best)

Work Experience

Tata Consultancy Services Ltd.

New Delhi, India

Design Engineer

October 2017 - August 2021

- Execution of layout and packaging of parking sensors in passenger cars adhering to safety standards for a Japanese automaker
- 3D modelling from styling surfaces and creation of 2D drawings of the bumper and related mounting
- Designed pneumatic and hydraulic systems in shipbuilding as a member of the Ship Systems Design team in collaboration with the other design departments