Nishita Kapoor

AI for Healthcare | Biotechnology

Passionate, excited and eager to join the revolution that AI has created in the field of healthcare. I bring in extensive domain know-how in biotechnology, and applied practical experience in AI through multiple projects.
Project Portfolio: https://nishita-kapoor.github.io/

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github.com/Nishita-Kapoor

WORK EXPERIENCE

Data Scientist (Digitization & Automation)
Eisai Pharmaceuticals India Pvt. Ltd.

03/2018 - 07/2019 *Visakhapatnam, India*

- Responsible for transforming the Quality Control lab into a paperless laboratory by digitizing and automating workflows using the LIMS (Laboratory Information Management System) system.
- Implemented Computer System Validation and data integrity in regulatory environment.
- Gained extensive experience in helping design, build, test, and operate IT systems and applications for data management, lab data automation, and data analysis.
- Collaborated with several cross-functional teams and stakeholders.

Research Assistant
Dept. of Toxicology, Maastricht University

01/2016 - 04/2017 *Maastricht, Netherlands*

- Collaborative research project with Maastricht University Medical Center towards understanding wound healing properties of medical grade manuka honey.
- Investigated mechanism of action and antibacterial effects of Manuka honey using Electron Spin Resonance (ESR) spectroscopy.

Research Internship
Dept. of Biochemistry, La Trobe University

05/2013 - 07/2013 *Melbourne, Australia*

- Research internship on understanding mitochondrial diseases through protein isolation and characterization to identify key players.
- Recipient of Endeavor Scholarship for Student Exchange Program.

EDUCATION

Masters, Biotechnology
Indian Institute of Technology, Madras

07/2009 - 07/2015 *Chennai, India*

- Molecular Biology, Bioinformatics, Probability & Statistics, Neuroscience, Computational Engineering.
- **Master Thesis:** Enhancing Bioethanol Production from Betel Nut Husk.
- **Research Project:** Toxicity Analysis of Menadione (Vitamin K) on Oral Cancer cells.

SOFT SKILLS

Analytical thinking | Attention to detail | Structured | Teamwork | Communication skills | Interpersonal skills

TECHNICAL SKILLS

Data Science
Machine Learning, Deep Learning, Computer Vision, Data Analysis, Image Processing, Data Visualization

Programming Languages
Python, MATLAB, C++, SQL

Tools and Technologies
Git, GitHub, Docker, Linux, Google Colab

Python Libraries
PyTorch, Keras, Scikit-Learn, SciPy, Pandas, Numpy, OpenCV, Matplotlib, Seaborn, Flask

PROJECTS

Deep Learning for Brain MRI Segmentation
- Implemented UNet and ResNext architectures for segmentation using PyTorch and achieved dice score of 0.96 on test set.
- Model deployment as a web service using Flask and Docker.

Skin Cancer Lesion Classification
- Performed transfer Learning based on ResNext101 CNN architecture and achieved 0.81 F1 score on test set.
- Carried out thorough exploratory data analysis including data cleaning, visualization and pre-processing.
- Investigated the effect of focal loss and weighted cross-entropy loss to mitigate class imbalance.

Pneumonia Detection from Chest X-Rays
- Implemented VGG-16 and ResNet-50 model trained on Chest X-Ray images from Kaggle for Pneumonia detection.
- Achieved 85% test accuracy with only 5 epochs of training using limited hardware.

COURSES & CERTIFICATIONS

Deep Learning Specialization (06/2020 - 09/2020)
deeplearning.ai, Coursera (5 courses)
- Neural Networks & Deep Learning, Regularization & Optimization, CNNs, Sequence Models.

Python Bootcamp (05/2020 - 08/2020)
Udemy
- Python Data structures, OOP, Error Handling, Unit Testing, Python with Images.

AI in Medicine Specialization (10/2020 - 11/2020)
deeplearning.ai, Coursera (5 courses)
- AI for Medical Diagnosis, Prognosis and Treatment.

Applied Data Science with Python Specialization (10/2020 - 12/2020)
University of Michigan, Coursera (4 courses)

LANGUAGES

English (Fluent) ●●●●●

Hindi (Native) ●●●●●

German (B1) ●●●○○