

# Noor Fathima

+91 97912 27968 - [itsnoorfathima@gmail.com](mailto:itsnoorfathima@gmail.com) - [LinkedIn/noor-fathima14](https://www.linkedin.com/in/noor-fathima14) - [GitHub/NoorFathima14](https://github.com/NoorFathima14)

## EDUCATION

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**PSG College of Technology**  
*M.Sc Data Science CGPA: 8.42*

**Coimbatore, India**  
*Aug. 2022 - Present*

## TECHNICAL SKILLS

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**Programming Languages:** Python, C++, C  
**Libraries and Tools:** Git, NetworkX, scikit-learn, Pandas, Gephi  
**Databases:** MySQL

## WORK EXPERIENCE

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### Machine Learning Intern

*SolutionChamps Technologies Ltd.*

*May - June 2024*

- Worked on Deepfake Detection in the domain. Led the data collection and preprocessing phase of the project. Collected and organized a balanced dataset of genuine and fake videos, processed and labeled frames, and prepared data for training machine learning models.

## NON-ACADEMIC PROJECTS

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- **PathMaster** Comprehensive project management application written in C++.
  - This application leverages the Critical Path Method (CPM) for project scheduling.
  - Users input activity details, dependencies, and durations to calculate key scheduling parameters and identify the critical path for optimized project management.
- **MagnetRx** Pain relief analysis tool in R.
  - Pain management is analyzed using active versus placebo magnets, with statistical methods including hypothesis testing (t-tests) and linear regression models.
  - Evaluates effectiveness and identifies significant differences in pain ratings using multiple hypothesis testing methods.

## ACADEMIC PROJECTS

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- **MammoDetect** Breast cancer detection system using Siamese Neural Networks.
  - Developed a breast cancer detection system using a Siamese neural network to classify mammograms.
  - Optimized performance with data augmentation, oversampling, and hyperparameter tuning. Deployed a Streamlit-based GUI for interactive image comparison and diagnosis.
- **GestureNet** Real-time sign language recognition tool using Python.
  - Developed a real-time sign language recognition system using HOG features with SVM and KNN classifiers.
  - Integrated a live video feed for gesture prediction and implemented a GUI for user interaction.
- **BloomSearch** Text search engine using Bloom filters.
  - Developed a text search engine using a Bloom filter for fast and space-efficient lookups with controlled false-positive probability.
  - Validated results with binary search, leveraging SHA256 hashes for reliable data handling.

## EXTRACURRICULAR ACTIVITIES

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- **National Cadet Corps (NCC)** Completed "A" Certificate, participated in drills, community service, and leadership activities August 2023 - present