# Fauzan Farooqui

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# **EDUCATION**

## VISVESVARAYA NATIONAL INSTITUTE OF

TECHNOLOGY Nagpur, India | 2019 - Present B.Tech, Computer Science & Engineering

GRADE 12 - CBSE BOARD Sharjah, UAE | 2019 Average Percentage: 91.6%

GRADE 10 - CBSE BOARD Sharjah, UAE | 2017 CGPA: 10/10 (equivalent to a 100%)

# SFI FCTFD COURSEWORK

- IIIT-H's Advanced NLP Summer School (on-site)
- The NLP course by Stanford University [Notes]
- NVIDIA DLI Workshop on Building Transformer-Based NLP Applications
- Courses 1, 2 and 4 of the Deep Learning Specialization by DeepLearning.AI on Coursera
- Computer Vision Artificial Intelligence
- Information Retrieval
  Data Mining
- Data Structures Algorithms OOP
- Compilers Calculus Linear Algebra
- Probability Statistics & Queuing Theory
- IBM QGSS 2020 and 2021
- Ongoing: Advanced Computer Architecture; Graph Theory; Parallel Computing; Economics

# **SKILLS**

#### **PROGRAMMING LANGUAGES**

Python, C++, C. Basic: Java, JavaScript

#### **PYTHON ML LIBRARIES**

PyTorch, HuggingFace, Scikit-learn, NumPy, Pandas

#### **SOFTWARE / TOOLS**

SQL, MongoDB, LaTeX, Bash / Linux, Git, OpenMP

#### **NATURAL LANGUAGES**

English, Urdu, Hindi, French. Basic: Arabic, Telugu

## **SOFT SKILLS**

Strong analytical thinking, leadership, collaborative team-building, and academic writing skills.

# **EXTRACURRICULARS**

- Student Volunteer at the on-site EMNLP-2022 Conference in Abu Dhabi, UAE
- Core Member and NLP Mentor at IvLabs, VNIT's Al and Robotics Lab - Taught at workshops too
- Best Position Paper Award at VNIT's MUN 2023
- IEEE VNIT Student Branch Coordinator
- Editor at Mag.Com, the Literary Club of VNIT
- Best Prefect Award, 2016-2017 Recognition by school for a distinguished leadership role

# **EXPERIENCE**

## **RESEARCH INTERN**

VNIT, India | Jul - Dec 2022

- Aimed at using improved embedding techniques to effectively perform the open information extraction task of generating structured triples from natural language sentences.
- Submitted a paper at a prestigious academic venue (under review).

## SUMMER RESEARCH INTERN

[GitHub]

IvLabs, VNIT, India | Jul - Aug 2020

- Aimed to recognize the speaker in an audio file, from a database of various speakers' voices.
- Implemented basic signal processing and classification algorithms, such as LPC and MFCC.

#### SOFTWARE ENGINEERING INTERN

[Testimonial]

Esri R&D Center, Sharjah, UAE | Jul 2017

- Analyzed sample data through maps, using Esri's ArcGIS software.
- Exposure to software engineering processes and spatial thinking.

# **PROJECTS**

## LINK PREDICTION IN OPEN KNOWLEDGE GRAPHS

Graph Theory Course Project, VNIT | Apr 2023 (Ongoing)

• Aiming to improve reasoning over OKGs by introducing Graph Neural Networks in PyG to learn entity-mention node features.

## STATISTICAL MACHINE TRANSLATION

[Presentation] IIIT-H's IASNLP Summer School Project | Jun 2022

• Investigated the effects of tuning English to Hindi, Telugu, Tamil SMT models on different evaluation metrics (BLEU, chrF, TER, etc).

## NEURAL MACHINE TRANSLATION

[GitHub]

IvLabs. VNIT | Dec 2021

• Implemented novel architectures, like Transformers and RNNs, in PyTorch using the Multi30k Dataset for German-English.

#### SENTIMENT ANALYSIS

[GitHub]

IvLabs, VNIT | Jan 2022

• Benchmarked the LSTM, FastText and BERT text classification architectures in PyTorch on the IMDb Movie Reviews dataset.

## TRAVELING SALESMAN PROBLEM SOLVER

[GitHub]

Artificial Intelligence Course Project, VNIT | Oct 2022

• Implemented the A\* search algorithm to solve the TSP, using the minimum spanning tree heuristic function.

#### HEAP MEMORY MANAGER

[GitHub]

Concepts in Programming Languages Course Project | Feb 2021

• Implemented the malloc and free functions in C, on a heap, using the first-fit allocation strategy.

## LINUX COMMAND SHELL

[GitHub]

Operating Systems Course Project, VNIT | Sep 2021

- Developed a basic Linux shell using multithreading in C POSIX.
- Handles multiple serial / parallel commands and signal interrupts.

## WEATHER TRACKING NETWORK

Data Structures Course Project, VNIT | Apr 2021

• Implemented AVL Binary Search Trees in C for data structures and operations designed to manage weather and sensor network data.