Abdullah Faiz Ur Rahman Khilji

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EDUCATION

National Institute of Technology Silchar

Silchar, Assam

B.Tech, Computer Science and Engineering, Gold Medalist

CPI: 8.41, Grad: June 2021

Pace Junior Science College

Intermediate Science

Mumbai, Maharshtra Percentage: 77.23

Mumbai, Maharshtra

Ashok Academy, Andheri

Matriculation

CGPA: 9.8

Achievements and Honors

- Awarded the Kalikrishna-Mrinali Deb Krori **Gold Medal** for the **best engineering graduate** of the institute, considering all-round activities.
- Selected to attend and participate in the AI Summer School, Google Research India for Computer Vision and Machine Perception Track. Was one among the top 150 from thousands of applicants nationwide.
- Delegate at Machine Intelligence and Brain Research conference 2018, Center for Computational Brain Research, IIT Madras.
- Best Presentation Award Student Research Convention Anveshan 2.0
- 2nd position at CICLing 2020 UrduFake track @ FIRE 2020 out of 39 teams that participated globally.
- Finalist at Smart India Hackathon 2019, organized by MHRD, Government of India.
- Secured 1st Position in Tech Review and 2nd Position in Web-Spyder under Abacus (Technical Week of Computer Science Society, NIT Silchar).

WORK EXPERIENCE

Amazon Pay UPI Team

Since July 2021

Amazon, Bangalore

- Working with the Amazon Pay UPI team to provide secure and easy payment to each individual.
- Technologies used: Java, JSP, JavaScript

CX Improvements on UPI Dashboard

Summer~2020

 $Mentor:\ Arkoprovo\ Dey$

Amazon, Bangalore

- Worked with the Amazon Pay UPI Team.
- Enabling VPA to be Easily Copied and Shared via External Platforms.
- Technologies used: Java, JSP, JavaScript

Annotation Boundary Prediction Approaches for Document Image Analysis

Summer 2019

Guide: Dr. Ravi Kiran Sarvadevabhatla

Center for Visual Information Technology, IIIT-Hyderabad

- $\bullet \ \ \text{An optimal } \textbf{edge-prediction} \ \text{approach for } \textbf{boundary annotation} \ \text{for } \textbf{palm-leaf } \textbf{manuscripts} \ \text{was proposed}.$
- Presented a Flask application in a Web Portal facilitating easier annotation using Splines/Polygons.
- The benchmark model is class agnostic thus featuring easier annotation via bounding box supervision.

Publications

Have **over 20 publications** in various Journals, Book Chapters and Conferences in the domain of natural language processing, computer vision, information retrieval and its applications.

Full list at: https://scholar.google.com/citations?user=M6iVZjwAAAAJ

KEY PROJECTS

Realtime Healthcare ChatBot Prototype

Winter 2019

Guide: Dr. Partha Pakray

CNLP Lab, NIT Silchar

- Built a Recurrent Embedding **Dialogue Policy** based Healthcare chatbot system.
- Achieved benchmark results on C@1 and Human Evaluation Indexes.
- Data was curated from real-life scenarios on consulting medical experts.

Feature Engineering for Text Classification with Topic Modeling Equipped Graph Convolution Networks and Fake News Detection \(\mathbb{C} \) Summer 2019

Guide: Dr. Thoudam Doren Singh

CSE Department, NIT Silchar

- Converted into a node classification problem by constructing structured heterogeneous text corpus graph.
- Created semantic rich features by using **Text GCN** and topic modeling based approach-**LDA** which are then fed into a deep classification model employing **skip connections**.

UNIX Command Line Prediction System

Guide: Dr. Thoudam Doren Singh

Autumn 2018 CNLP Lab, NIT Silchar

• Designed and Developed **Knowledge Base** construction and employed a **Seq2seq** model for predicting the next command given the previous *n* commands.

• Implemented **Joint Learning** word embeddings using a corpus and a knowledge base improving the overall accuracy by 8.7 % over the last best approach.

MR2Vec: Patient Case Similarity Detection

ezDI - Smart India Hackathon '2019

Spring 2019 NIT Warangal

- Calculation of Patient Similarity based on Patient Demographic and Case Details extracted from **XML annotations** in Electronic Health Records (EHR). **XSLT** used for transforming and extracting annotated data.
- An **ensemble model** consisting of both **Word Mover's Distance (WMD)** and General Feature Extraction based on curated list of important sections were utilized in the ratio 3:1.

Tecnoesis 2018 Website: Annual Techno-Management Fest of NIT Silchar 🗹

 $CSS \mid JS$

- Core member of the web team of Tecnoesis 2018
- Developing and updating the website on AWS platform, given the time constraint.
- Website hits: 25,000+ page-views, 9,000+ sessions. Minimum Alexa Rank reached $\approx 14,200$ (India)

Movie Recommender System 🗷

 $Flask \mid mongoDB \mid Docker \mid Scrapy$

- Designed and Developed vectorised approach for User-User, Item-Item Collaborative Filtering and Matrix Factorization algorithms for scalable deployement by increasing efficiency by over 67%.
- Application deployed and made portable by **dockerising** into a container.

Backend development of International Conference BigDML 🗷

 $PHP \mid SQL$

• Developed the back-end component of the website of International Conference on Big Data, Machine Learning and Applications with Mail and ReCaptcha functions.

TECHNICAL SKILLS

Programming Languages: Java, JS, Python, C/C++

Development: JSP, Flask, PHP, MongoDB, MySQL Other Languages Used: PyTorch, TensorFlow, Bash, LATEX

Positions of Responsibility

Center for Natural Language Processing 🗹

2020

Under Dr. Partha Pakray

NIT Silchar

- Single handedly designed the user interface, website logo and developed the entire website from scratch.
- Mentored Research Interns at CNLP Lab over the domain of Hindi and Bengali Image Captioning, Health-Care based Chatbot system, Music Classification and Recipe Recommendation domains. The interns guided by me have communicated papers in various journals and conferences.

NITS Hacks 2.0 🗹

Under GUIST and TEQIP III in association with Tecnoesis 2018

NIT Silchar

• Core team member, responsible for **managing**, **designing** and hosting the **website** for promoting and ensuring smooth run of this nation wide **hackathon**.

Project Consultant at University College London in association with Kennedy's Law

2021

Under Dr. Fabio Caccioli and Dr. Damla Arifoglu

VOLUNTEER WORK

- Volunteered for the thirty-eighth International Conference on Machine Learning (ICML 2021)
- Reviewer for BioNLP and SDP tracks at 2021 Annual Conference of the North American Chapter of the Association for Computational Linguistics
- Represented the class of CSE 2021 batch for administrative purposes (class representative).

KEY COURSES UNDERTAKEN

Computer Science: Deep Learning¹, Machine Learning, Winter Course on Machine Intelligence and Brain Research², Neurobiology of Learning and Memory³, Principles of fMRI¹, Digital Image Processing, Natural Language Processing, Neural Network, Artificial Intelligence, Theory of Computation, Data Structures, Algorithms with Design and Analysis, Java SE8 Programming, Advanced Computer Architecture⁴, Quantum Computing⁴, Computer Network, 30 days of Google Cloud, System Programming, Operating System, Compiler Design, Database Management System, Software Engineering.

Mathematics and Statistics: Calculus, Linear Algebra, Differential Equations, Real Analysis, Complex Analysis, Numerical Analysis, Probability and Statistics, Discrete Mathematics, Stochastic Process, Numerical Methods.

¹Coursera, ²CCBR IIT Madras ³NPTEL, ⁴8th Semester Elective