Kavyanjali Agnihotri

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Education

Eberhard Karls University of Tübingen   Tübingen, Germany
M.Sc. in Machine Learning   *October 2024 - September 2026*

Birla Institute of Technology & Science, Pilani   Hyderabad, India
B.E. in Computer Science, CGPA: 8.49/10   *November 2020 - July 2024*

Relevant Coursework: Data Structure and Algorithms, Operating Systems, Computer Networks, Database Systems, Object-Oriented Programming, Compiler Construction, Probability and Statistics, Linear Algebra, Calculus, Differential Equations, Discrete Mathematics, Software Engineering, Machine Learning, Deep Learning, Information Retrieval, Human Computer Interaction, Design & Analysis of Algorithms, Data Visualization

Work Experience

Eberhard Karls University of Tübingen | Scholar Inbox   Tübingen, Germany
Student Assistant   *December 2024 - Present*
- Working on the development of Scholar Inbox using Python, Postgres, and React

Cisco   Bengaluru, India
Technical Intern I   *January 2024 - June 2024, June 2023 - July 2023*
- Updated 15+ Java libraries in 20+ repositories, resolving bugs and errors
- Implemented a feature to simplify error logging in Secure Network Analytics
- Developed a Jenkins pipeline to auto-generate error analysis reports
- Collaborated to build a QA bot for module updates and product-related queries
- Increased unit test coverage up to 95% across 25+ files
- Containerized and streamlined deployment using Docker and Jenkins for 8+ repositories
- Automated information extraction from directories using Python and Bash scripting

Palmtree Infotech   Chennai, India
Technical Intern   *May 2022 - July 2022*
- Used GPT-6B and GPT-NeoX for medicine multi-entity recognition using zero-shot and few-shot learning techniques

Skills

Programming Languages: C++, Python, C, Java, JavaScript, HTML/CSS
Technologies: MongoDB, Express.js, React, Node.js, Docker, Numpy, Pandas, Plotly, Selenium, NLTK, Git, Postman, MySQL, Django, Azure AI Services

Projects

ProSys | MERN Stack Application   January 2023 - April 2023
- Developed a web platform for managing project proposals, applications, project approvals and submissions for admin, students, and professors
- Added functionality to grade students and chat

Generating Lecture Notes | Python, BeautifulSoup, PyTorch   January 2023 - March 2024
- Created a Prerequisite Knowledge Graph via hub and authority scores to combine data on different topics to develop scientific lecture notes to understand a concept
- Preprocessed the scraped data and fine-tuned a BERT model using SimpleTransformers to predict the optimal placement for images, pseudocodes, and formulas within the definition
- Leveraging LDA segmentation and bagging techniques notably minimized bias, improving the depth and inclusivity of the lecture notes

Boolean Retrieval System & Page Ranking | Python, NLTK   March 2022 - May 2022
- Implemented a boolean information retrieval system with stopword removal and lemmatization
- Optimized search with spell correction by Levenshtein Distance and wildcard query handling using the bigram technique
- Implemented Page Rank algorithm using Power Iteration method to rank web pages for a given query and analyzed Random Teleportation with varying probabilities

- Implemented HITS Algorithm to evaluate web pages based on hubs score and authority score

Neural Style Transfer | Python, Pytorch, Tensorflow   November 2022 - December 2022

- Leveraged VGGNet architecture and ADAM optimizer for efficient image stylization
- Significantly enhanced stylization quality by introducing a novel depth preserving function into the loss function, leading to faster convergence, fewer iterations, and more visually appealing results

Spatial Indexing with QuadTrees | C++   February 2022

- Designed and implemented an efficient system for executing geometric queries
- Utilized QuadTrees to achieve faster query processing time compared to other indexing methods

Matrix Multiplication with OS Concepts | Linux, C   November 2022

- Developed a program to perform matrix multiplication efficiently using multi-threading
- Used multi-threading and synchronization for reading input matrices in parallel
- Analyzed and compared the response time, turnaround time, and waiting time for different scheduling techniques such as FCFS, SJF, and Round Robin with different time quanta

Chatbot for Visually Impaired Students | Python, Microsoft AI tools   November 2022

- Built a simple multilingual chatbot using NLP techniques to answer questions and assist visually impaired students
- Integrated basic NLP pipelines and early-stage intent classification to improve user interaction

Achievements

ELIZA stipends 2024-26: Awarded 24-month stipend by Zuse School ELIZA from October 2024 to September 2025
AI Incubator Batch 6, 2025: Selected participant in a competitive AI startup incubator
JPMC Code for Good Hackathon 2023: Finalist among 25+ teams
Google Girl Hackathon 2023: Top 2.5% of candidates
ICPC Amritapuri Regionals: Ranked 1197/5000 participants
JEE Advanced 2020: Ranked 4860/43000+ candidates
Academic Performance Scholarship 2020: Awarded by the state government