ADITI KAJALE

📞 +1 4133151082 ✉ kajaleaditi01@gmail.com 🔗 linkedin.com/in/aditi-kajale ⌂ Google Scholar

EDUCATION

University of Massachusetts Amherst   **Expected Graduation: May 2027**
Master of Science in Computer Science   Massachusetts, USA
Key Courses: Machine Learning, Advanced Natural Language Processing, Computer and Network Security

MKSSS Cummins College of Engineering   **Aug 2019 - Jul 2023**
Bachelor of Technology in Computer Engineering - **GPA** : **9.34 / 10**   Pune, India
Key Courses: Data Structures, Algorithms, Artificial Intelligence, OOPS, Operating Systems, DBMS

TECHNICAL SKILLS

Programming: C, C++, Python, Java, Javascript, HTML, CSS
Databases: MySQL, NoSQL (MongoDB), SQL Server, Redis
Frameworks & Tools: React, Redux, Spring Boot, Transformer Models, Pandas, PyTorch, TensorFlow, Scikit-learn, NumPy, Model Fine-tuning, Linux, Git, GitHub, Agile Development, SDLC, REST APIs, JUnit

EXPERIENCE

D.E. Shaw & Co. - Member of Technical Staff ⌂   **Jul 2023 – Jul 2025**
Tech Stack: Java, SpringBoot, REST APIs, JavaScript, React, Redux, SQL Server, MyBatis

- Designed full-stack solutions for critical workflows in large financial systems. Enhanced performance with caching and key features — achieving **80%** faster API responses and **85%** increase in user efficiency.
- Engineered an **advanced regex-based search** for a secure note management platform processing sensitive Managing Directors' compensation data. Optimized performance with Redis caching, slashing search time by **75%**.
- Integrated **'@' annotation support to reference attachments** within note content, with **automated hyperlinking** and **attachment retrieval** in exported files.
- Implemented **Usage Auditing** across the financial systems by implementing a thread-safe concurrent linked queue data structure for in-memory record buffering, coupled with a **batched processing mechanism**.

L3 Cube Labs - Natural Language Processing Intern   **Sep 2022 - Jul 2023**
Tech Stack: Python, PyTorch, TensorFlow, Transformers, BERT, Hugging Face

- Proposed a two-step fine-tuning process on machine-translated NLI and STS datasets. Released L3Cube-MahaSBERT and L3Cube-HindSBERT, exhibiting state-of-the-art performance for **semantic sentence similarity**.
- Developed L3Cube-IndicSBERT, the first multilingual sentence representation model for 10 major Indic languages.
- L3Cube-IndicSBERT has a total of **403k+** downloads, L3Cube-HindSBERT has **14k+** downloads, L3Cube-MahaSBERT received **6k+** downloads to date.

Veritas Technologies LLC - Machine Learning Intern   **Sep 2022 - Jun 2023**
Tech Stack: Python, PyTorch, TensorFlow, Transformers, BART

- Built an integrated text summarization engine through independent research and analysis of summarization techniques.
- Constructed a **transformer-based abstractive text summarization** model by tweaking the BART model on novel data, achieving a **30%** increase in the ROUGE scores.

D.E. Shaw & Co. – Technology Developer Intern ⌂   **May 2022 – Jul 2022**
Tech Stack: Java, SpringBoot, REST APIs, Aspect Oriented Programming(AOP), JavaScript, React, SQL

- Independently developed a **full-stack AOP solution** to track user activity on the firm's Compensation Portal handling sensitive compensation data. Optimized end-to-end response time to **20 ms** and provided support for the Struts-based legacy codebase to enable seamless integration.
- Designed and implemented proof-of-concept user interface components to visualize portal performance and usage analytics for accurate system monitoring and load forecasting.

PROJECTS

- **NSE BSE Arbitrage Recommendation System** | GitHub | Angular, Java, Spring Boot, MySQL, JUnit
  Built a web-based trade recommendation system using the Yahoo Finance API to detect BSE–NSE arbitrage opportunities in Nifty 50 stocks, enabling real-time email alerts and improving trading efficiency.
- **TESSA: the 4-in-1 text analytics engine** | Python, NLP, Transformer Models - BERT and BART
  Engineered an integrated NLP platform leveraging Transformer architecture for Abstractive Text Summarization, improving ROUGE-L and content coherence scores by 30% through model fine-tuning and data optimization.

PUBLICATIONS AND ACCOMPLISHMENTS

- Published 3 research papers in the domain of ML & NLP in proceedings indexed by Springer, ACL Anthology and IEEE.
- Won the apprenticeship project competition by Citi Corp by securing the first position in the hackathon.
- Honored with the WeTech Goldman Sachs global mentorship award, awarded to only 50 recipients all over India.
- Selected as one of the top 200 participants in Flipkart Girls Wanna Code 4.0 program out of 9,700 applicants.