

# ARCHIT RATHOD

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## EDUCATION

### University of Illinois Chicago

Master of Science in Computer Science

Aug 2024 – May 2026

### University of Mumbai (Thadomal Shahani Engineering College)

Bachelor of Engineering in Information Technology

Aug 2020 – May 2024

CGPA 9.35 / 10

## EXPERIENCE

### Digital Information Research Lab, Boston University

Research And Development Engineer

Dec 2023 – Jun 2024

Remote (Boston)

- Led a team of 14 in developing a gamified virtual marketplace experiment using Empirica.ly and React.js, collecting and analyzing data from 2000 human participants to study advertising impact on market dynamics under Prof. Marshall Van Alstyne.
- Engineered a diverse ecosystem of AI-driven consumer and producer behaviors, including humanized chatbots with varied strategies, to analyze ethical advertising practices and decision-making processes in a controlled environment on AWS and Prolific. [Link](#)

### SimPPL

Research and Web Engineer

Mar 2023 – Jun 2024

Remote (New York)

- Led a team of 2 in developing an ethical AI research under Prof. Deb Donig - UC Berkeley, analyzing 60 threads with 2,300 messages from Stormfront alongside LLM-generated responses, utilizing Perspective API for toxicity scoring to prevent harmful content generation in large language models.
- Engineered a comprehensive network graph visualizer package using React.js, FastAPI, and Neo4j, overcoming node size constraints of previous tools like Gephi, to enhance data visualization for platforms such as YouTube, Bluesky, and TruthSocial. [Link](#)
- Spearheaded a large-scale YouTube data project, collecting and analyzing data from 1,600 channels, 440K videos, and 45 million comments, employing causal inference to study cross-platform sharing effects on comment volume and quality. [Link](#)

### Kaizen Future Tech

Research Intern

June 2021 – July 2021

Mumbai, Maharashtra

- Built IoT projects using Arduino and Node MCU CPUs on virtual software like TinkerCAD and Proteus. Learned Arduino Programming in C/C++ and different sensors used in solving real-life problems.
- Worked on automation tasks for detecting 4 natural calamities by intersecting IoT and Deep Learning models like Resnet with an accuracy of 94%.

## RESEARCH AND PUBLICATIONS

**Ascend.ai - Building Confidence Through Technology: A Technical Exploration of Facial Expression, Tone and Pitch Analysis with Chatbot Guidance.** – Springer Scopus Series, ICDSA 2024

**Leveraging CNNs and Ensemble Learning for Automated Disaster Image Classification** – Springer Book Series 'Algorithms for Intelligent Systems', ICSISCT, 2023 [ArXiv](#)

**Multi-Agent Simulators for Social Networks** – Multi-Agent Security (MASEC AI) Workshop, NeurIPS 2023 [ArXiv](#)

## PROJECTS

**Attire.AI** | *Stable Diffusion, LoRA, LLama, VGGNet, ZoeDepth, Fast API, MongoDB, Next.js, Tailwind*

[GitHub](#)

- A conversational fashion outfit generator that enables users with interactive features such as adding clothing items to images and receiving tailored fashion recommendations using Generative AI.
- It offers a dynamic fashion experience through a canvas interface and chatbot, allowing users to explore, enhance, and innovatively personalize their fashion choices.

**Social Vision** | *TF-IDF, Support Vectors, LSTM, Fast API, Tweets Dataset, MongoDB, Next.js, Tailwind*

[GitHub](#)

- Developed a graph-based model to identify coordinated inauthentic behavior on Twitter by connecting users who consecutively post the same content within a time threshold.
- Implemented agenda and propaganda detection of coordinated Twitter networks, achieving 94.6% accuracy, along with fake news identification with an F1-Score of 93.1%.

**Ascend.AI** | *Librosa, OpenCV, LLama, MongoDB, Next.js, Tailwind*

[GitHub](#)

- It aims to revolutionize interview preparation by leveraging an audio sentiment analysis model with an accuracy rate of 81%, aiming to boost communication skills and confidence.
- Incorporated real-time feedback and video mock interview evaluations to provide a personalized coaching experience, achieving an accuracy of 97.2%.

## TECHNICAL SKILLS

**Languages:** Python, Javascript, HTML, Shell

**Tools/Frameworks:** Scikit-Learn, React.js, Node.js, FastAPI, Next.js, Git, Github, jQuery, Tailwind, Gephi, PySpark

**Databases:** MySQL, MongoDB, BigQuery, Neo4j

**Devops:** Vercel, Google Cloud Platform(GCP), Docker, Vertex.AI

## EXTRACURRICULAR ACTIVITIES

Participated in 10+ hackathons and won 6 of them.

Conducted a React.js Crash Course named 'React Zero-to-Hero' under the HoD of IT department.

Gave an invited talk at a Fellowship backed by Google Research and Mozilla on the YouTube Data Project.

[Certificates](#)

[Details](#)

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