

# Kshitij Sharma

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## EDUCATION

<b>Virginia Tech</b> <i>Bachelor of Science in <b>Computer Science</b> and Minor in <b>Finance</b></i> <ul style="list-style-type: none"><li>• <b>Activities:</b> VT Hacks, HackViolet, Data Structures and Algorithms at VT</li><li>• <b>Relevant Courses:</b> Operating Systems, Data Structures and Algorithms, Computer Architecture</li></ul>	08/2022 – 05/2026 Blacksburg, Virginia
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## PROFESSIONAL EXPERIENCE

<b>Undergraduate Student Researcher</b> <i>Virginia Tech Department of Computer Science</i> <ul style="list-style-type: none"><li>• <b>Enhancing</b> TaleMate, an <b>AI-powered reading platform</b>, by developing, troubleshooting, and refining conversational AI using React.js, APIs, and AI-driven interactions within EchoLab, <b>improving parent-child engagement</b> as measured by user feedback.</li></ul>	01/2025 – Present Blacksburg, Virginia
<b>Software Engineering Intern</b> <i>Ventura Corporation</i> <ul style="list-style-type: none"><li>• <b>Developed cross-functional document management services</b> for diverse clients, improving document retrieval efficiency by 50% as measured by system performance benchmarks by implementing advanced <b>query recognition</b>, metadata extraction, and automated classification.</li><li>• Engineered and implemented a <b>robust middleware framework</b> using Node.js and Flask, enhancing system scalability and robustness as measured by integration success with <b>Azure</b> Cognitive resources, including <b>Cosmos DB</b>, by designing efficient API workflows and data pipelines.</li><li>• <b>Optimized</b> Agile development processes, increasing team productivity as measured by <b>sprint velocity</b> by actively participating in daily scrums, bi-weekly sprints, review sessions, <b>retrospectives</b>, and backlog refinements.</li></ul>	05/2024 – 07/2024 Reston, Virginia
<b>Market Research and Data Analyst Intern</b> <i>Mobalytics Services and Consulting</i> <ul style="list-style-type: none"><li>• Conducted comprehensive <b>market research</b> and data analysis to identify expansion opportunities for company solutions.</li><li>• Utilized tools such as Excel, Tableau, and <b>SQL</b> to drive data-driven decisions and strategic planning.</li><li>• Developed and delivered presentations summarizing research findings and providing evidence-based recommendations.</li></ul>	02/2024 – 04/2024 Remote

## PROJECTS

<b>Advanced Song Retrieval Application</b>   <i>AngularJS, Node.js, Flask, Azure CosmosDB for NoSQL, Azure OpenAI</i> <ul style="list-style-type: none"><li>• Engineered a music search platform that returns the most suitable song choices based on user queries.</li><li>• Integrated advanced natural <b>language processing</b> capabilities for understanding queries and dataset using Azure CosmosDB and Azure OpenAI for vector search.</li><li>• Optimized the generation of text embeddings by implementing efficient algorithms, reducing processing time and resource usage by 20% while maintaining high accuracy in query matching.</li><li>• Achieved a 40% improvement in search accuracy by leveraging AI embeddings and semantic search techniques.</li></ul>	05/2024
<b>Internal Document ChatBot</b>   <i>Azure Language Resource, Azure CosmosDB for NoSQL, Node.js, Angular.js</i> <ul style="list-style-type: none"><li>• Developed a <b>virtual assistant</b> to analyze internal employee documents and answers questions based on queries</li><li>• Leveraged Azure Language Resources and <b>CosmosDB</b> for natural language understanding and generation.</li><li>• Integrated Chatbot as a Teams plugin for support within the company's communication platform.</li></ul>	05/2024
<b>College Roommate Finder Platform</b>   <i>Java EE, Spring, MySQL, React.JS, Node.JS, Docker, Google Maps API,</i> <ul style="list-style-type: none"><li>• Developed a personality based roommate matching application for college students</li><li>• Utilized Spring for backend development; <b>React.js</b> for responsive frontend.</li><li>• Encapsulated the application in <b>Docker</b> containers for portability and scalability.</li><li>• Integrated JWT Token Authentication to secure user sessions and protect personal data.</li></ul>	01/2024
<b>Real Time Emotion Analysis Engine</b>   <i>Python, TensorFlow, Keras API, OpenCV</i> <ul style="list-style-type: none"><li>• Developed an emotion classification engine for real-time facial expression detection.</li><li>• Implemented <b>Convolutional Neural Networks</b> (CNNs) in Keras, achieving up to 90% validation accuracy.</li><li>• Enhanced data processing efficiency for live video, ensuring prompt and accurate <b>emotion detection</b>.</li></ul>	10/2023

## SKILLS

- **Programming Languages:** Java, JavaScript, TypeScript, Python, C, C++, x86Assembly, HTML/CSS, DBMS (MongoDB, PostgreSQL, MySQL)
- **Libraries & Frameworks:** Flask, React, Angular, Node.js, Spring, Python ML (TensorFlow, PyTorch, Scikit-Learn)
- **Developer Tools:** Git, Linux, Docker, AWS, Azure (CosmosDB, Language Studio, AI Search, OpenAI), Jira, Figma, Storybook