

Ritom Sen

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EDUCATION

University of Michigan - Ann Arbor

Expected Graduation: May 2025

BS Computer Science, Minor in Mathematics, Minor in Music | GPA: 3.678/4.0

- **Relevant Coursework:** Data Structures and Algorithms, Discrete Math, Object Oriented Programming, Foundations of Computer Science, Human-Centered Software Design and Development, Machine Learning, Web Systems
- **Skills:** C++, Python, Go, Flask, Django, Git, HTML, Firebase, Flutter, AWS, Node, React, Jenkins, JavaScript, SQL
- **Organizations:** Alpha Kappa Psi Business Fraternity, Entrepreneurial Power Hour, Michigan Data Science Team

EXPERIENCE

Capital One

Chicago, IL

Software Engineering Intern

June. 2024 – August. 2024

- Collaborated with intern team to create a full-stack internal debugging tool leveraging a Go backend, React typescript frontend, internal APIs, and AWS, to help with end-to-end testing for a new decision platform for credit card applications
- Distributed product to over 50 software engineers who actively used our product to help debug downstream API output as well as to validate over 406 credit card application test cases in end to end testing, saving over 33 percent of time per case
- Reached out to engineers to gauge feedback and refine product leading to new UI and backend implementations which increased usage to over 450 daily endpoint calls per day, leading to savings of over 65,000 dollars of time monthly

Capital One

McLean, VA

Software Engineering Intern

June 2023 – August 2023

- Interviewed 15 Performing Data Stewards (PDS) within the company to learn about their daily job and user needs in order to create a business problem and lead design for our summer project aimed at helping over 2000 PDSs save time
- Implemented project idea, a Slack bot that automates time-consuming and frequent tasks for PDSs, provides resources to help onboard new PDSs, and displays metrics on a dashboard, by using the Slack API, Python, internal secret management, and several internal APIs, and deployed it onto an AWS Fargate container, which returned positive feedback from PDSs
- Presented regularly throughout the summer in front of other interns, PDSs, full-time associates, senior managers, directors, and a VP about the progress and workflow of our team and project, returning favorable critiques from management
- Expanded upon minimum viable product functionalities using natural language processing and machine learning techniques and libraries such as Lemmatization, NLTK, Bag of Words, Tensor Flow, and a stochastic gradient descent method to integrate our built-in functionalities with a simple question and answer chatbot

JBR Sports Organization LLC

Ann Arbor, MI

Co-Founder

January 2021 – November 2023

- Founded JBR Sports, a company that creates a luxury experience in recreational sports or esports tournaments targeted at college students, developing a social reach of over 10,000 people in the Ann Arbor, Saline, and Brighton area
- Created The Champions League, a yearly basketball league which hosted teenagers and adults in a summer long tournament including weekly videography, grossing over \$15,800 in revenue and included 150 participants over two years

PROJECTS

TemGen Audio Plugin

- Building an audio plugin for pitch shifting and time stretching to use in Logic Pro, using C++, JUCE framework, CREPE Pitch Tracker, Differentiable Digital Signal Processing, Beat Tracker, Rubber Band Library, and Open-Unmix

Cnct - Birthday Reminder App

- Leveraged Flutter and several flutter libraries (such as flutter local notifications) to create an IOS app that allows you to import/add your friends birthdays and reminds you using push notifications with functionality to text them with pre-written birthday messages

GeminiScript

- Connected an AppScript to a Python backend that used Google Gemini to implement auto correction, AI writing enhancement, and text editing using voice input; tested on VR simulators for future use cases

ADDITIONAL

- Achieved superior rating from the National Federation of Music Clubs and recorded a studio album of concert piano including several Chopin nocturnes, waltzes, and the Fantaisie Impromptu
- Passionate about social impact and created the social justice club Students Against Racism in high school which educated over 200 elementary students on diverse perspectives and implicit biases through children's books and active lessons
- Interested in traveling, making music, poetry, playing and watching soccer, philosophy, and chess