Subodh Kathayat

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EDUCATION

New Jersey Institute of Technology   Expected May 2027
Bachelor of Science in Computer Science   *Newark, NJ*

SKILLS

Programming: Python, MySQL, Golang, Swift, C++
Developer Tools: Git/Github, Microsoft Suite, VS Code, Generative AI, Figma (UIUX), Adobe
Certifications: **AWS** Cloud Practitioner Certification (In-progress)

EXPERIENCE

Data Management Intern, CDS   Feb. 2025 – Present
New Jersey Institute of Technology   *Newark, NJ*
- Incoming Spring data management intern (Python, MtSQL, PySide, PowerBI)

Undergrad Research Assistant   Sept. 2024 – Present
New Jersey Institute of Technology   *Newark, NJ*
- Designing a swarm robotic localization system using **Python3** (Pymunk, Pygame) to optimize robot positioning algorithms, resulting in a 25% reduction in localization error
- Collaborating with teammates to apply **data analysis** and visualization techniques to real-world robot **datasets**

Software Engineering Fellow   July 2024 – Sep. 2024
Headstarter AI   *Remote*
- Built backends for 3 AI apps using **Python, OpenAI, and Stripe API** with 98% accuracy seen by 1,000 users
- Developed projects from design to deployment leading 2+ engineering fellows using MVC design patterns
- Coached by Amazon, Bloomberg, and Capital One engineers on Agile, CI/CD, Git, and microservice patterns

Software Engineering Fellow   May 2024 - Jul. 2024
CodePath.org   *Remote*
- Enhanced proficiency in advanced **data structures and algorithms** through hands-on labs and mock interviews
- Utilized the UMPIRE method to systematically approach complex problems in sorting, recursion, & system design

PROJECTS

Echoes (In-Progress) | *Swift, SwiftUI, AVFoundation, Core ML, Figma*
- Building an iOS app with Swift and Core ML for seamless communication via **text-to-speech** and speech-to-text
- Implemented a locally trained AI model for on-device document processing and intelligent responses

Neptou - The Tourism Bud | *Swift, Google Maps API, Figma*
- Engineered Neptou's mobile architecture using Swift and Google Maps API, implementing scalable location-based services and validating its impact on the tourism sector
- Earned national recognition as a Top 5 Finalist in the **ICT Award 2022** (Nepal's most prestigious IT award) and secured 4th place in Code for Change 2022, the country's largest hackathon, competing against 400 participants

Ragnarok AI (Hackathon NJIT 2024) | *Next.js, LangChain, OpenAI, Vercel, Github*
- Programmed an AI-powered chatbot for real-time Badminton news updates using **LangChain**, Next.js, Vercel, and OpenAI, enhancing response accuracy with web scraping and vector embeddings
- Implemented a Retrieval-Augmented Generation (**RAG**) system that helped in real-time info

Terminal Asteroids game | *C++, Git*
- Created a console-based Asteroids game in C++, leveraging OOP and physics to create realistic gameplay
- Designed a **toroidal mapping system** and optimized collision detection, enhancing gameplay responsiveness

LEADERSHIP

- Founding of a non-profit AashaKaPaila since 2020, completed 20+ community services & helped **150+ families**
- Founding **Vice-President** of Nepali Student Association at NJIT (2024/2025)
- Active member of **Association for Computing Machinery** club at NJIT
- Passionate **Badminton Athlete** (All-time gold medalist in Inter-university tournaments, represented NJIT)