

# Abhilash Sampath

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## EDUCATION

- University at Buffalo** Buffalo, New York  
• *Master of Science - Computer Science; GPA: 3.83*  
*Courses: Analysis Of Algorithms, Distributed Systems, Data Intensive Computation, Reinforcement Learning, Computer Vision*  
Aug 2022 - Dec 2023
- Visvesvaraya Technological University** Bengaluru, India  
• *Bachelor of Engineering - Computer Science; GPA: 3.36*  
Aug 2016 - Aug 2020

## EXPERIENCE

- Surya Software Systems Pvt Ltd** Sep 2020 - Aug 2022  
• *Software Engineer*
  - Full-Stack Acceleration:** Spearheaded a team of 4 in creating a full-stack code generator, enhancing development efficiency by **22%** and streamlining the development process. (React, NextJS)
  - Wrapper Library:** Accelerated organizational-wide adoption and improved productivity by masterfully developing and publishing a React, FluentUI Wrapper on npm, reducing development time by **20%** (TypeScript)
  - Migration Architecture Design:** Formulated a strategic migration blueprint for transitioning a proprietary product from .NET to React, ensuring seamless integration and modernization. Analyzed the existing system architecture and proposed a streamlined solution. Communicated effectively with stakeholders to ensure alignment with business objectives.
  - Comprehensive hospital app :** Independently engineered a versatile hospital management application for diverse user personas, successfully completing and delivering the project within a tight **6-month** deadline. Collaborated with offshore stakeholders to identify key requirements and ensured alignment with project objectives. (Angular, NestJS, MySQL, Docker)
  - Interoperability Enhancement:** Employed innovative gRPC technology to migrate Ktor API, resulting in a substantial **28%** increase in communication speeds between company systems, bolstering overall performance. (Kotlin, Angular)
  - Latency Improvement Initiative:** Achieved a **15%** reduction in latency on the development server by skillfully implementing nginx, fostering a more efficient and responsive environment. Leveraged strong problem-solving skills and technical expertise to optimize system performance and improve user experience. (Kotlin, TypeScript)
  - Framework Migration Proposal:** Pioneered a Ktor API POC, laying the groundwork for the organization's framework migration from Entity Framework Core to Ktor, enhancing adaptability and efficiency. (Kotlin, Ktor)
  - Query Optimization:** Tactfully utilized HikariCP and JDBC to elevate query response time by **18%** on a development server.

## PROJECTS

- Spam Detection for Amazon Reviews:** Utilizing Apache Spark on a **million+** Amazon reviews, implemented machine learning models, notably achieving **92%** accuracy in spam detection with Gradient Boosting Trees. The project significantly elevates e-commerce, enabling well-informed customer choices. (July '23)
- Raft Protocol Development from Scratch:** Engineered and implemented the Raft Protocol entirely from the ground up, creating a dependable distributed log service across multiple nodes, and securing high data consistency and system uptime. (July '23)
- Ensemble Deepfake Detection: A Video Magnification Approach Using ResNext and Xception:** Expertly harnessed these methodologies to create an advanced Deepfake detection solution, significantly enhancing content authenticity and preserving digital media integrity in a rapidly evolving landscape. (May '23)
- Scalable DHT Development:** Successfully developed a resilient, Kademlia-inspired distributed hash table for optimal performance and scalability in complex networks. (Golang)(March '23)
- AWS Deep Racer - Reinforcement Learning :** Crafted an ingenious custom reward function using Huber Loss, achieving a flawless **100%** completion rate and securing a distinguished position within the top **5%** (rank **147**) of **3196** participants. (Python, AWS)(November '22)
- High-ROI Algorithmic Trading Strategy :** Created a data-driven trading strategy for intraday equity trades, achieving a minimum return of 10% and up to **30%** for TSLA stocks within a trading year. (Python) (October '22)

## SKILLS SUMMARY

- Programming and Markup Languages:** Python, TypeScript, Javascript, Golang, Java, HTML, CSS
- Frontend & UI Libraries:** React, Redux, Angular, Vue
- Frameworks:** Node.js, MERN Stack
- Cloud Services:** AWS, Azure, Heroku
- Tools:** Docker, GIT, Postman
- State Management:** Flux, Redux
- Platforms:** Linux, Windows