

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, 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**
• *Software Development Engineer II* Sep 2021 - Aug 2022
 - ML Model Integration:** Ingeniously developed and implemented a robust machine learning pipeline, successfully integrating cutting-edge ML models that enhanced product features and performance by a remarkable **35%**. This strategic implementation accelerated data processing, boosted user satisfaction, and significantly increased overall system efficiency.
 - 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.
- Surya Software Systems Pvt Ltd**
• *Software Development Engineer I* Sep 2020 - Aug 2021
 - 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 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

- Euler Video Magnification & Visual Transformers for Deepfake Detection:** 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.
- Face and Gender Recognition with Sentiment Analysis - Computer Vision:** Applied cutting-edge computer vision techniques with OpenCV and scikit-learn for in-depth analysis and actionable insights. (Python) (March '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, accomplishing a **100%** completion rate and securing a notable rank of **147** out 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)
- Proximal Policy Optimization - Reinforcement Learning:** Executed the PPO algorithm from scratch to tackle the demanding OpenAI gym environment Bipedal Walker, attaining an average score of 300 over 100 episodes. (Python, OpenAI Gym, PyTorch) (September '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