Aarshee Bhattacharya

Fargo, North Dakota

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Education

University of Florida   **Aug. 2021 – Dec. 2022**
Master of Science in Computer Science (GPA:3.7)   *Gainesville, FL*

MIT WPU   **July 2017 – May 2021**
Bachelor of Technology in Computer Science (GPA:4.0)   *Pune, Maharashtra, India*

Relevant Coursework

- Data Structures
- Software Methodology
- Algorithms Analysis
- Database Management
- Artificial Intelligence
- Internet Technology
- Systems Programming
- Machine Learning

Experience

Pursuit Software Inc.   **Aug. 2023 – Present**
Quality Software Engineer   *Fargo, ND*

- Developed and maintained automation frameworks using Python and Java, integrating with Azure DevOps APIs to create scalable testing infrastructure supporting continuous deployment pipelines
- Built containerized applications using Docker and Docker Compose, implementing microservices architecture with proper service discovery and load balancing for distributed systems
- Designed and implemented monitoring solutions using Azure Monitor, Grafana, and ELK Stack, creating custom dashboards and alerting systems for real-time application performance tracking
- Developed REST API integrations with OAuth 2.0 and JWT authentication, implementing secure communication protocols between multiple microservices and external systems
- Architected cloud infrastructure using Terraform and Azure Resource Manager templates, automating provisioning and configuration management for scalable cloud-native applications
- Implemented CI/CD pipelines with automated testing, deployment, and rollback capabilities, reducing deployment time by 60% and ensuring zero-downtime releases
- Mentored junior developers on software engineering best practices, code review processes, and modern development methodologies including Agile and DevOps practices
- Implemented secure API testing protocols using OAuth 2.0 and JWT token validation, coverage and authentication mechanism verification for ensuring security testing.
- Established quality gates and testing standards in collaboration with development teams, mentoring junior QA engineers on automated testing best practices and quality assurance methodologies.

Marlabs LLC   **Feb. 2023 – Aug. 2023**
Full Stack Developer   *Gainesville, FL*

- Built a full-stack hotel reservation web application, utilizing Spring Framework for the back-end to leverage its dependency injection and MVC architecture, Angular.js for the front-end to create dynamic user interfaces, and MongoDB for flexible and scalable data storage.
- Implemented Agile methodologies.
- Ensured iterative development, frequent communication, and adaptability.
- Conducted bug tracking.
- Managed Kubernetes clusters for microservice deployments, integrating Prometheus and Grafana for performance monitoring, reducing downtime by 30%
- Developed JMeter test plans for stress testing of the hotel reservation APIs, scaling user simulations to identify system performance limits.

Amazon.com   **May 2022 – Aug. 2022**
Software Developer   *Arlington, VA*

- Integrated Slack and Chime with webhooks.
- Automated application deployments using Helm charts, optimizing deployment time by 25%.
- Performed performance testing of messaging integrations, using JMeter's distributed testing mode to simulate concurrent usage.

University Of Florida   **Nov. 2021 – Nov. 2022**
Machine Learning Engineer   *Gainesville, FL*

- Extracted image features and saved them as embeddings using CNN models to capture high-level visual information.
- Tokenized textual captions into word sequences and converted them into integer sequences using word embeddings like Word2Vec and GloVe.
- Designed neural network architecture combining visual and textual information for caption generation using encoder-decoder architecture with attention mechanisms.
- Implemented the model using PyTorch, leveraging its dynamic computation graph for flexible deep learning development.

ISKCON   **July 2020 – Dec. 2020**

Mobile Application Developer Intern   *Pune, India*
- Developed a mobile application from scratch along with a website.
- Kotlin: Primary programming language for Android development.
- Android Jetpack Components.
- Utilized Architecture Components like ViewModel, LiveData, and Room for data management.
- Firebase: Integrated Firebase Cloud Messaging (FCM) for push notifications and Firebase Realtime Database for real-time data updates.
- ExoPlayer: Used for streaming live video content for temple ceremonies.
- RecyclerView: Displayed lists of events, services, and resources in a scrollable manner.
- Material Design Components: Implemented UI components following Material Design guidelines for a modern and intuitive user interface.
- Designed another mobile application with Flutter Software Development Kit and Dart.
- Received a feedback of 4.7 out of 5.
- Wrote 20K+ lines of code and led a team of two.

AI Full-Stack Project

Uternity   **May 2025 – Present**

Co-Founder   *Fargo, ND*
* Led technical architecture and development of AI-powered international student admission platform serving students across 500+ universities worldwide
* Architected University Finder tool and AI agents including SOP generator, chatbot, and comparison engine, delivering personalized university recommendations with 90%+ compatibility accuracy
* Developed integrated platform streamlining entire admission journey from research to application, reducing student preparation time by 60% through automated AI-driven guidance

Projects

* Healthcare Monitoring System-Integrated medical-grade sensors with Raspberry Pi for data acquisition developed Python scripts to read sensor data accurately and reliably and ensured reliable data transmission in remote and challenging environments.
* MyMovieList-Integrated with a movie database API for a movie recommendation API, with a collection of over 50,000 movies and applied a recommendation engine that generated personalized movie recommendations resulting 25% user engagement.
* Automatic Parking System- Mounted an automatic parking system using RFID and sensors.

Technical Skills

Programming Languages: Java, Python, C/C++, JavaScript, SQL, R, C#, HTML/CSS, Shell Scripting, Groovy
Frameworks & Libraries: Spring Boot, React, Node.js, Flask, Django, .NET, Angular, Vue.js, Flutter, Material-UI, FastAPI, JUnit, Mockito
Cloud & DevOps: Azure, AWS, Google Cloud Platform, Docker, Kubernetes, Jenkins, Terraform, CI/CD Pipelines
Databases & Storage: MongoDB, PostgreSQL, Oracle RDBMS
Testing & Monitoring: JMeter, Tosca, QTest, Cypress, Grafana, ELK Stack
Tools & Platforms: Git, VS Code, IntelliJ, PyCharm, Eclipse, Jira, Confluence, Linux
Architecture & Patterns: Microservices, ORM, JPA, Hibernate, Agile Development

Leadership

Hackathon   **Jul 2020**
· Participating in the Smart India Hackathon involves teams collaborating to tackle complex software development projects aimed at addressing various societal or technical challenges faced by India. Pitched in Secure Healthcare Monitoring System for War Soldiers and secured the second position