

# Naman Shrimali

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## EDUCATION

- Master of Science in Computer Science** *Aug 2021 – May 2023 (Expected)*  
**North Carolina State University, Raleigh, NC**
  - Bachelor's in Computer Science and Engineering** *Aug 2015 – May 2019*  
**Poornima College of Engineering, Jaipur, India**
- Relevant Coursework: Design and Analysis of Algorithms, Object Oriented Design and Development, Introduction to Artificial Intelligence, Database Management Systems, Operating Systems

## TECHNICAL SKILLS

Languages: Python 3 (Proficient), Java 11 (Proficient), JavaScript ES6 (Experienced), SQL (Experienced), Ruby, Prolog  
Frameworks: PyTorch, CUDA, Spring Reactive, Spring Boot, Hibernate, Log4j, Junit  
Web Technologies: Angular 10, REST, OAuth2, Web Sockets, HTML5, SASS  
Databases: MongoDB, Apache Cassandra, Redis, DB2, MySQL, HBASE (DB Management System)  
Tools: AWS (EC2, S3, Lambda), Azure, Heroku, Docker, Kubernetes, Jenkins, Git, Maven, NPM, Tomcat/Nginx

## PROFESSIONAL EXPERIENCE

- Software Engineer, IBM India Pvt. Ltd., Hyderabad, India** *Jun 2019 – Jul 2021*
- Auto Replenishment Project for a major US based retail chain**
    - Led a team of 5 for development of a RESTful solution and web application on **Spring Reactive, Angular 8** that allowed customers to automatically place recurring orders online, used **Jenkins** for Continuous Integration/Deployment.
    - Developed framework for component and integration tests for services using **JUnit5** and **MockWebServer** combined with **SonarQube** for ensuring 95%+ code coverage and fault tolerance on each deployment environment.
  - Cards and Payments project for an Australian banking major**
    - Developed tooling for deriving and aggregating customer's verified income and expenses data under a single dashboard for upfront customer borrowing conversations using **HBASE**, eliminating need of manual collection.
    - Enhanced services to counter issues such as frequent cluster disconnection, cold starts by refactoring codebase and introducing cache replication and persistence using **EHCache** and **Redis**, effectively reducing the down time by ~35%.
- Machine Learning Intern, Centre for Development of Advanced Computing, Jaipur, India** *May 2018 – July 2018*
- Worked on architectures like **ResNet**, **InceptionNet**, **RCNNs** and **YOLO** and improved accuracy by implementing several CNN based fine-tuning solutions such as Sequence of Convolutions, Pooling, Activation functions.
  - Implemented breakthrough research papers like **GRAD-CAM**, **Ghost BatchNorm**, **Super-Convergence**.

## PROJECTS

- Role-based reviewing on [Expertiza](#) (Open-Source Contribution)** *Oct 2021*
  - Implemented "role-based reviewing" on **Expertiza**, a learning and peer grading platform which enabled reviewers, peers on the platform to use different evaluation metrics for each "role" (such as developer, maintainer, architect, scrum master etc) in an agile team for performance evaluation under guidance of Prof. Edward F. Gehringer using **Ruby on Rails**.
- QnA Chatbot using transformers ([X-RAG](#))** *Jun 2021 – Jul 2021*
  - Scraped questions, answers, and relevant information as the context from Pytorch documentation, FAQs, discussion forums, captions from YouTube tutorial videos
  - Built an **NLP** based chatbot using **PyTorch** for generating answers to questions specific to PyTorch using two pretrained **HuggingFace BERTs** as encoders, **FAISS** for context matching and retrieval and pretrained **BART** as decoder.
- Object, Depth and Plane Detection using PyTorch ([Doepd.ai](#))** *Apr 2021 – May 2021*
  - Combined 3 **CNN** architectures to build a REST service capable of detecting PPE objects such as *masks, hardhat, vest, boots* (**YOLOv3**), estimating monocular depth (**Intel MiDaS**) and plane segments (**NVIDIA PlaneRCNN**) from a 2D image.
- Work Management System ([Spryly](#))** *Jan 2021 – Feb 2021*
  - Developed a work management system facilitating agile team collaboration on **live Kanban framework** using **Angular 9** for front-end, **Spring Cloud**, **Reactive** and **RabbitMQ AMQP**, **STOMP** services for back-end and **MongoDB**, **MySQL** for database.
  - Secured with **Google OAuth2**, containerized with **Docker**, Deployed on **AWS EC2** with **GitLab CI/CD**.

## Certifications

- Microsoft Certified: Azure Fundamentals *Apr 2021*
- Deep Learning Specialization - [deeplearning.ai](#) *May 2019*