

# DINESH YADAV

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## EDUCATION

### Georgia Institute of Technology

Atlanta, GA, USA

Master of Science, Computer Science (MSCS) – (Computing Systems & Machine Learning)

Aug 2024 – Dec 2025

### Bharati Vidyapeeth College of Engineering

Pune, IN

Bachelor of Engineering, Electronics & Telecommunications (B.Tech ECE)

Aug 2015 – June 2019

### Bharati Vidyapeeth

IN

Diploma in Network Security (Cyber Security)

Aug 2015 – June 2018

## EXPERIENCE

### Johnson Controls

May 2022 – Aug 2024

Software Engineer

Gurgaon, IN

- Worked on development of a modern Access Control solution as replacement for their existing leading product for building automation (KANTECH EntraPass & CCURE)
  - Worked on backend core services using the Spring Boot to design a cloud based multi-tenant SaaS distributed system
  - Collaborated with the architect to integrate search engine using Elasticsearch for enhanced search functionality
  - Implemented global exception handling, effective testing strategies, and Flyway DB migration, contributing to improved code structure and maintainability
  - Designed, implemented, and tested RESTful APIs, including API documentation
  - Mentored new joiners, conducted code reviews, testing, addressing vulnerabilities, and codebase optimizations
- Worked on: Java, Spring Boot, Angular, Postgres, Pub-Sub, MQTT, C#, Docker, Kafka, Github Actions, Elasticsearch

### Amdocs (AT&T)

Feb 2020 – May 2022

Software Developer

Gurgaon, IN

- Worked on development, modernization and cloud migration of on-prem legacy applications to cloud services for AT&T
- Modernized two telecom billing application by migrating from a monolithic JSP/Servlet based architecture to a cloud native two-tier microservices-based system using Spring Boot and React
- Enhanced operational efficiency by over 90% by automating manual unix server checks for file presence and health status along with other automations using Python, as part of the SRE team.

### IT Bodhi (EdTech) | Machine Learning Intern

July 2019 – Dec 2019

- Worked on data science, machine learning and deep learning projects, including classification, computer vision, NLP, and various supervised and unsupervised learning techniques
- Developed a custom Question-Answering Chatbot from scratch for a FinTech client as part of the internship

### Legalsalah (Fintech Startup) | Web Developer Intern

Jan 2019 – Apr 2019

- Rebuilt the content management system (CMS) for enhancing the blogs section with new editing tools for improved productivity and user experience (javascript, php)
- Redesigned authentication and implemented role-based access and authorization to strengthen CMS security

## TECHNICAL SKILLS

**Programming:** Java, Python, C/C++, C#, SQL, JavaScript, HTML

**Frameworks:** Spring Boot, JUnit, Mockito, Node.js, Express.js, Next.js, React.js, Android

**Databases:** PostgreSQL, MySQL, SQLite, NoSQL MongoDB

**Software & Tools:** Git, IntelliJ IDEA, Visual Code, CI/CD, Devops, Docker, AWS, Azure, GPC, IoT, Redis, Jenkins, Visual Studio, Jupyter, Linux, Unix, Google Colab, Anaconda, JIRA, Confluence

**Libraries:** pandas, NumPy, matplotlib, scikit-learn, TensorFlow, PyTorch, Keras, MQTT, LangChain (AI, LLM)

## PROJECTS

### Multi User Blogging platform | Node.js, MongoDB, Express.js, Next.js, REST API, Nginx, AWS

- A multi-user supported SEO optimized blogging web application (SPA) based on MERN stack with SSR support
- Offers an intuitive and seamless user experience, allowing multiple users to create and manage their blogs efficiently
- Hosted on an Amazon AWS EC2 instance, providing reliable and scalable infrastructure for the web application
- Session Management - JWT authentication - SEO Optimized Server Side Rendered Application

## **Relational Database Implementation** | C++, Data Structures & Algorithms

Aug 2024 - Present

- Developing a fully functional relational database from scratch using C++17
- Implementing core components: external sorting, buffer management, B-Tree indexing, and query execution engine
- Focusing on advanced C++ techniques and database low-level system design

## **Mini-Internet: Autonomous System Network** | Computer Networks, Network Routing, Security

Aug 2024 - Present

- Designing a scaled-down Autonomous System (AS) network, simulating real-world Internet infrastructure
- Configuring OSPF for intra-domain routing and BGP for inter-AS communication
- Implementing BGP policies to model business relationships between ISPs

## **Job Offer Comparison Android App** | Java, Android Studio, SQLite

- Designed an Android app to compare job offers against a current job, enabling users to make informed career choices
- Allows users to set custom weights for factors like salary, bonuses, career growth, cost of living, and other benefits to accurately calculate and rank job offers
- Facilitates side-by-side job comparisons with detailed breakdowns, allowing users to easily evaluate offers and select the best opportunity based on their personal priorities

## **Theremin: Gesture-Controlled Electronic Music Synthesizer** | Electronics

- Developed a Theremin using radio antennas to detect proximity and generate musical tones without physical contact
- Utilizes a radio antenna as a proximity sensing device with variable capacitance to detect the presence of a human body
- Enabled interactive music creation through hand gestures, showcasing innovative use of proximity sensing technology

## **BLOGS**

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- **CNN vs MLP for Image Classification** | Published in Analytics Vidhya - Nov 2019  
Explaining why Convolutional Neural Networks (CNNs) are favored over Multilayer Perceptrons (MLPs) for image classification.
- **Beginner's Guide to RNN & LSTMs** - Dec 2019  
An introductory guide to RNNs and LSTMs, explaining their ability to handle sequential data.
- **Django Essentials: A Beginner's Introduction** - Jan 2020  
An intro to Django basics, including its architecture and key features for web development.