

ABHISHEK PRAKASH

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SOFTWARE DEVELOPER

Software Developer with 2+ years of experience in front-end and back-end development, machine learning, AI, and infrastructure as code. Proficient in Python, Flask, React, AWS, Docker, and CI/CD, with a strong foundation in **data structures and algorithms**. Passionate about building scalable, high-performance systems, solving complex problems, and continuously learning.

TECHNICAL SKILLS

- **Programming Languages:** Python, JavaScript, TypeScript, Shell Scripting
- **Web Development:** React, Next.js, Node.js, Flask, Bootstrap, REST APIs, NGINX
- **Cloud & DevOps:** AWS, Docker, GitHub Actions, GitLab CI/CD, Ansible
- **Databases:** PostgreSQL, MongoDB, Redis, SQL, SQLite
- **Machine Learning & AI:** PyTorch, TensorFlow, Pandas, Scikit-learn, Deep Learning, Reinforcement Learning

EXPERIENCE

Software developer | Pro Playgrounds [USA]

[May 2023 - Present]

- Led development of modular, **responsive UI components** with **HTML, CSS, and JavaScript**, increasing **monthly traffic by 37%**.
- Engineered a dynamic **product filtering system**, improving catalog navigation **speed by 40%**.
- Automated **end-to-end testing** and deployment pipelines using **GitLab CI/CD, Selenium, Ansible**, and Python, optimizing backend processes and checkout experience.

Full Stack Developer | meabhi.me (Self Employed) - [Remote]

[Jan 2024 - Present]

- **Portfolio Migration:** Upgrading to **React, Next.js, and NestJS (TS)** for **scalability & modular architecture**. Integrating **PostgreSQL & MongoDB** for structured & unstructured data.
- Refactored monolithic architecture into a **hybrid microservices model**, improving **scalability and maintainability**.
- **Chat App** : Built a **real-time messaging app** with **React, Flask, MongoDB, Redis, and WebSockets**.
- Implemented **JWT authentication**, reducing unauthorized access by **30%**.
- Designed a **responsive and intuitive UI** with **Bootstrap**, ensuring optimal performance and a seamless experience.
- **Tiny Url Generator** : Developed a **URL-shortening service** with **React, Flask & Redis**, reducing query time by **25%**.
- Incorporated **collision avoidance** and exposed a **REST API** for URL creation and redirection.
- **Portfolio Website** : Developed both **Front-end and Backend** and deployed a personal portfolio site on **AWS EC2**, automated with CI/CD pipelines, **NGINX**, and **Ansible**, achieving **99.9% uptime**.

Software developer and DevOps | Cognitive Geo Interpretation Inc - [USA]

[Jan 2022 – Dec 2022]

- Designed & implemented a **GitLab CI/CD pipeline**, automating **AWS EC2 provisioning** for a **microservices** architecture.
- Integrated **Ansible** for automated configuration management, consistency and reducing developer setup time by **55%**.
- Increased **test coverage from 63% to 78%** by using **Pytest & unit testing**.

Research Assistant | Florida State University - [USA]

[Feb 2023 - July 2023 ; Apr 2021 - Dec 2021]

- Developed **Federated Learning (Fed-Avg)** models on MNIST dataset, achieving **94% accuracy** using **PyTorch**.
- Built a **Double Deep Q-Learning model** for **edge computing**, optimizing **task off-loading by 30%**, Using **Pytorch**.
- **Developed a backend with Python Flask** for efficient CRUD operations on an SQLite database, populating it with **2,000 entries** and optimizing query performance by **20%**.

PROJECTS

DevOps Engineer | [Automated EC2 Provisioning and Git Repository Management](#)

[Aug 2023 - Oct 2023]

- Automated **EC2 provisioning** with **Ansible & GitLab CI/CD**, reducing **deployment time by 75%**.
- Configured **secure Git repositories** and **SSH key management** and integrated **AWS S3** for reliable data storage and retrieval.

ML Engineer | [Open-Source Patching and Un-patching tool](#)

[Aug 2021 - Oct 2021]

- Developed an open-source tool, "**Patching**," inspired by **Patchify**, a tool for image segmentation & recombination using **PyTorch & NumPy**.
- Additionally, designed an "**Unpatching**" tool to seamlessly merge the enlarged patches back into the original image by using an **interpolation algorithm**.
- Achieved **79% test coverage** with unit tests & **CI/CD automation**.

ML Engineer | [Pytorch Image Style Transfer](#)

[Jul 2021 - Sep 2021]

- Implemented the methodology from **Image Style Transfer** using **Convolutional Neural Networks (CNN)** paper on style transfer in **Pytorch**.
- Utilised the **model VGG19**, extract the content and style from layers to create a new target image.

EDUCATION

M.S in Computer Science | Florida State University

[Jan 2021 - Apr 2023]

- Courses: **Deep Reinforcement Learning**, Data and Computer Communication, **Artificial Intelligence**, **Advanced Algorithms**, **Network System Admin**, **Intro to Data Science**, **Database management systems**.

B.E in Computer Science | Bhilai Institute of Technology

[May 2014 - Jun 2019]

SOFT SKILLS

- **Active Listening** | **Leadership Skills** | **Critical Thinking** | **Bilingual Communication** | **Adaptability**