ABHISHEK PRAKASH

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SUMMARY

An industry professional with over two years of industry experience, I specialize in Machine Learning, DevOps, and Software Engineering. My passion lies in leveraging computational algorithms to address real-world challenges, a commitment reflected in my progressive career and research experiences through the years.

TECHNICAL SKILLS

- Programming Languages and Scripting: **Python,C++, Shell Scripting**
- ML Stack: **Deep Learning, Machine Learning, ML Pipeline, ETL, Spark, Pytorch, Tensorflow**
- Others**: NoSql/Sql, Version Control, Git, Front-end, Agile Methodology**

EDUCATION

M.S in Computer Science, Florida State University - **GPA:3.3/4.0** **[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 - **GPA: 7.6/10** **[Jun 2019]**

EXPERIENCE

Software developer, Pro Playgrounds [USA] **[May 2023]**

- Implemented a **Machine Learning** product **recommendation** system, based on the most sold products in recent months.utilizing **Popularity-Based Recommendation** and **Content-Based Filtering algorithms**.
- Achieved a notable 20% increase in user engagement, a 15% improvement in click-through rates, and a 10% increase in conversion rates
- Conducted regular audits of 50+ plugins to ensure the website's **optimal** performance and maintenance.
- Implemented a robust sorting system utilizing plugins to enhance product filtering capabilities on the website.
- Executed comprehensive **testing** procedures for the website, employing **GitLab CI/CD**, **Selenium**, **Ansible** and **Python** to validate the efficiency of the **filtering** process and **optimize** the **customer checkout** experience.

Software developer, Cognitive Geo Interpretation Inc - [USA] **[Jan 2022 – Dec 2022]**

- Development, design, and ongoing maintenance of a robust **GitLab CI/CD pipeline**, enabling seamless infrastructure development for standalone machines on **AWS**. Employed **Ansible** for efficient provisioning processes. This pipeline has been instrumental in **production**, facilitating **developer machine deployments**..
- Pioneered the creation of an **image segmentation** algorithm tailored to merge inline and crossline datasets, significantly enhancing **model learning** through the power of **Active Learning techniques.**
- Elevated software quality through comprehensive **end-to-end testing** initiatives, driving an increase in test coverage from 65% to an impressive 75%. Leveraged **Pytest**, **unit testing**, and **coverage** analysis to achieve these results.

Research Assistant, Florida State University - [USA] **[Apr 2021 - Dec 2021]**

- Achieved a prediction accuracy of around 90% by Implementing **Fed-Avg algorithm** for **Federated learning** on **MNIST data set** with six learning workers using **Pytorch**.
- Achieved 30% faster task off-loading by developing **Double deep - Q learning model** in **Pytorch** for **Reinforcement Learning** task, on edge devices.
- Increase time efficiency by 60 % by developing automation scripts to collect and process data from Zigbee and Wi-Fi devices.

Voluntary Research Assistant, Florida State University - [USA] **[Feb 2023 - July 2023]**

- Accomplished the development of a **website backend prototype**, for seamless **CRUD** operations on an **SQLite** database using Python. Crafted and populated the database with a substantial dataset comprising 2000 entries.
- Tested code quality by leveraging **Pytest** and **Unit Testing** methodologies. Achieved an impressive 85% code coverage across the project, showcasing a meticulous approach to **software development.**

PROJECTS

Open-Source Patching and Un-patching tool **[Aug 2021 - Oct 2021]**

- Developed an **Open-Source tool** named "**Patching**" to cut the segments (patches) of an image. Enlarged patches using an **interpolation algorithm.**
- Developed an **"Unpatching**" tool that takes the enlarged patches and combines them to generate the final image using **Python, NumPy, Pytorch and Poetry.**
- Code optimization with **Pytest, Black Formatter, Pylint and Coverage.**

Automated EC2 Instance Provisioning and Git Repository Management **[Aug 2023 - Oct 2023]**

- Designed and implemented an **Ansible-based** system within **GitLab CI/CD,** streamlining the provisioning of **EC2 instances** for seamless **project deployment.**
- Developed custom scripts to orchestrate **Git repository management,** ensuring secure handling of **keys** and **permissions** for enhanced collaboration,Initialized and effectively utilized the **AWS** Command Line Interface (CLI) for seamless **infrastructure management.**
- Integrated **Aws S3** for efficient data storage and retrieval post **data processing,** ensuring data availability and reliability.

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.

SOFT SKILLS

- **Active Listening | Innovation | Critical Thinking | Bilingual Communication | Collaborative Team Player**