ANSHIKA BAJPAI

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EDUCATION

Jaypee Institute of Information Technology (JIIT)   **May 2021**
B.Tech. in Computer Science and Engineering (Honors)   GPA: 8.0

RESEARCH INTERESTS

Machine Learning, Data Science, Data Analytics, Artificial Intelligence, RNN, Generative AI, NLP, CNN

INDUSTRY EXPERIENCE

Optum, UnitedHealth Group | *Java | ML | Python | Spring boot | Maven | ReactJS| Talend | SQL*   **Jun 2021 – Present**
Software Engineer   *Bangalore, India*

- Led the design and development of critical software components for health insurance systems (UHOne).
- Developed end-to-end architectural designs for various features of the product.
- Led a successful hackathon project focused on cardiovascular disease prediction, achieving ***84.21% accuracy*** with ***Logistic Regression*** and ***82.89% with Random Forest models***.
- Refactored the existing legacy system (VUE coverage feed) with high code quality standards thereby, reducing code execution time from ***500+ minutes to less than 3 minutes***.
- Enhanced the report generation system by optimizing the file sizes from ***7426 Kb to 14 Kb***, hence improving the latency and minimizing the production cost.
- Built a system to send automated Compliance Notices through emails as part of "The Paperless Initiative", which saved the company ***$500,000 annually***.
- Created a real-time Grafana dashboard for the product to analyze metrics such as generated errors and letters, etc thereby, improving team efficiency by saving ***$15,000 annually.***
- Took initiatives to improve code quality & coding standards by introducing design patterns, writing unit tests with *at least 90% code coverage*, creating code review guidelines, and mentoring juniors across teams.

Taiyo LLC, San Francisco, USA   **Dec 2019 – Apr 2020**
Machine Learning Scientist Intern   *Remote*

- Developed an algorithm for a stock market prediction interface using Machine Learning and Deep learning.
- Implemented Hyperparameter tuning service using Bayesian Optimization algorithm to fetch best parameters for the model.
- Collaborated with team members in researching and evaluating cutting-edge machine learning techniques and technologies for potential adoption in future projects.
- Used Python and Scikit-learn to build predictive models for time series forecasting of stock financial data.

TECHNICAL SKILLS

Python, Machine Learning, Deep Learning, C++, Java, Data Structures & Algorithms, SQL, ReactJS, Azure, Design Patterns, Git, Jenkins

PROJECTS

Hindi Question Answering System | *Levenshtein model | NLP, Python*   **Mar 2023 – Jul 2023**

- Developed a Hindi question-answering system using the Levenshtein model, achieving an accuracy ***of 93.4***%.
- Thoroughly analyzed model performance, achieving 100% accuracy for exact matches, 90% for dissimilar queries, and addressing challenges in character-to-character matching for random queries.

Spam Email Classification System | *Logistic Regression | NLP, Python*   **Oct 2022 – Dec 2022**

- Created machine learning spam email filter, integrated into an email server, and boosted email security.
- Enhanced efficiency and user experience by reducing false positives and improving spam filtering with an ***accuracy of 98.7%.***

Handwritten Digit Recognition | *Deep learning | Feedforward networks | CNN | RNN, Python*   **Apr 2021 – Jun 2021**

- Developed a convolutional neural network to recognize handwritten digits using Python and TensorFlow with an ***accuracy of 95.1%***.
- Trained the model using stochastic gradient descent (SGD) with backpropagation.

PLANTIFY - Mobile Application | *Image Segmentation | CNN, Python*   **Jan 2020 - May 2020**

- Generated plant recommendations by analyzing a user's location and solar capabilities.
- Utilized a U-Net model for image segmentation to identify the boundary between the sky and ground and then encoded the results in a run-length format with an ***accuracy of 70%***.

Mental Health prediction of Instagram users | *Machine Learning and RNN | Python*   **Aug 2019 - Nov 2019**

- Leveraged deep learning and machine learning methods to forecast the mental health status of Instagram users.
- Performed multi-class and multi-label classification on Instagram posts.

PUBLICATIONS

Bajpai A., Kumar R., Kumar V., Pal R. and Mittal H., **Mental Health Classification of Instagram Users**, 11th International Conference on Signal Processing and Integrated Networks **(SPIN 2024). [SCOPUS] - Under Review**

VOLUNTEERING EXPERIENCE

National Service Scheme - Education and Cultural Team Head   Aug 2018 – Jul 2020
- Organized and managed blood donation camps, marathons, and plantation drives.
- Led educational initiatives, designed curricula, and participated in community projects, including food distribution and cleanliness drives.

Saksham: Child Welfare & Educational Trust   Dec 2019 - Feb 2020
- Actively participated in initiatives aimed at promoting child welfare and education, contributing to the organization's overarching goals.

Vegan Outreach - Volunteer   Feb 2019 - Mar 2019
- Engaged in vegan outreach, promoting plant-based living and animal welfare. Collaborated on events and campaigns to raise awareness.