Aarav V Bogadapati

FOUNDER : DeepTechNYSE.com, Inventor : FinTech Apps, ML Products

+1-9199875657 aarav.bogadapati@deeptechnyse.com aarav.bogadapati@gmail.com aaravbogadapati aarav-bogadapati About me Mentors

DeepTech Mission Vision

• At DeepTech, we believe that a transformative shift in global finance is achievable by making the latest AI and machine learning products accessible to everyone. Our Fintech solutions cater to modest investors, and we assist NGOs in streamlining their operations at a lower cost. We are committed to realizing this vision through our innovative DeepTech products & Apps.

ACHIEVEMENTS

- President's Award for Excellence in Academics Signed by Mr.Donald Trump, recognizing outstanding academics
- President's Award for Volunteer Service Signed by Mr.Biden, contributions to NGOs and community service
- Ranked Player Achievements in competitive activities, including Chess, Swimming, and Tennis
- ABRS Music University Certification Level 2 Flute certification awarded in the UK

INTERNSHIP

Mamlekhet Kohanim Program | **Azure, Databricks, Python, Google API's, GitHub** **04 2024**

- This Program aimed to gather and analyze data which can help African-American communities, particularly focusing on their tribal lineage. The challenge involved creating a Application to crawl Google search results, extract relevant data, and organize it into sensible reports for Data Scientists. To achieve goal, we have utilized various technologies: for web scraping, 'requests' was chosen for its simplicity and reliability in handling HTTP requests, while 'BeautifulSoup' was selected for its intuitive API, enabling efficient content extraction. Data handling was managed with 'openpyxl', allowing straightforward interaction with Excel files. The search functionality relied on 'googlesearch', which provided a simple interface for programmatic searches. The outcome was a robust system that met initial goals and allowed for future scalability, enabling efficient data collection while maintaining a focus on helping Data Scientist to make further progress in helping communities. The project consisted of four phases: Phase 1 implemented the web crawler to create a foundational dataset, Phase 2 enhanced search capabilities to explore multiple keywords for more accurate results, Phase 3 developed a notification system and established a POSTGRESQL database for better data organization, and Phase 4 emphasized automation and machine learning integration to refine searches and identify valuable information more efficiently.

DEEPTECH PRODUCTS & APPLICATIONS

FinTech Engine | Python, Report LAB, Machine Learning (SKLearn, LSTM Models), GitHub **03 2021**

- AI / ML application leverages Long Short-Term Memory (LSTM) networks to analyze stock data retrieved from Yahoo Finance. By predicting potential stock prices for the following day, it empowers users to make data-driven investment decisions, ultimately enhancing the profitability of their portfolios. The app automatically gathers historical stock data and real-time updates, providing accurate next-day price predictions. It also offers insights into top investors, including their ownership percentages, allowing users to learn from successful strategies. Additionally, the application integrates news headlines and sentiment analysis to gauge overall market mood and public perception, helping users understand broader trends. By combining predictive analytics with comprehensive market insights, this FinTech app aims to revolutionize the investment experience, enabling users to navigate the stock market with confidence.

Invoice Digitization App | Python, Machine Learning (OCR Model), GitHub **02 2022**

- The Invoice App is designed to automate receipt scanning and efficiently extract relevant financial data using a combination of advanced technologies. Key Python libraries utilized include 'os', 'json', 'datetime', 'shutil', 'logging', and 're', while image processing and OCR capabilities are powered by 'pytesseract', 'cv2', 'PIL', and 'pyzbar'. The objective of the project is to develop a model that leverages Optical Character Recognition (OCR) and machine learning techniques for effective data extraction. Pytesseract was chosen for its accuracy in converting images of text into machine-readable formats, allowing the extraction of crucial fields such as invoice amounts, tax amounts, and transaction dates from receipt images. Regular expressions (regex) are employed to parse and extract structured information, ensuring flexibility in handling various receipt formats. Additionally, barcode recognition is integrated using pyzbar, facilitating the quick retrieval of invoice numbers and reducing manual data entry errors. While the current focus is on OCR, future plans include considering machine learning models such as Support Vector Machines (SVM) and Random Forests for classification tasks,

and neural networks for advanced pattern recognition if sufficient data becomes available. Data is stored and managed using Google Sheets, providing a user-friendly interface for easy sharing and collaboration, along with real-time updates to financial data. Emphasizing the importance of data accuracy, the app incorporates validation processes to ensure extracted data meets established standards, with plans for iterative testing and improvement based on user feedback. Overall, the project aims to balance accuracy and speed, creating a user-friendly experience that minimizes manual input and maximizes automation while remaining adaptable to future challenges.

Video Surveillance Product | Python, Machine Learning (COCO Models), Linux, GitHub **02 2023**

- The Video Analyzer uses AI/ML libraries to facilitate object detection. Key libraries include `PyTorch` for deep learning capabilities and utilizing pre-trained COCO models, `torchvision` for image transformations and accessing object detection models, and `PIL (Pillow)` for image processing. The application utilizes transformations defined through the `transforms` module to prepare images before feeding them into the model. The core of the application employs the SSDLite MobileNet V3 model, which is efficient for object detection tasks. By using a pre-trained model, the application leverages transfer learning to minimize training time and resources. File input and output are managed effectively, allowing data logging and maintaining records of object detection results. Additionally, the application implements logic to automatically switch between CPU and GPU for processing, optimizing performance based on available resources. The object detection model interacts with the COCO dataset, enabling accurate recognition and classification of various objects in the images it processes. This integration allows for high-quality pre-trained models that enhance speed and efficiency compared to other models. Specifically, the model employed, named `ssdlite320_mobilenet_v3_large`, is built on MobileNet architecture, designed for both efficiency and speed, making it suitable for real-time applications. The model is instantiated using `model = ssdlite320_mobilenet_v3_large(weights=True)`, which loads the pre-trained weights, enabling it to process images for object detection and provide bounding boxes, labels, and scores for detected objects.

Mythical Mystery Game | C#, Unity, Linux, GitHub, Plastic SCM **02 2024**

- Game is an innovative first-person shooter (FPS) based on the Indian epic hero Arjun, the Ace Archer, merging cultural storytelling with cutting-edge gaming technology. Developed entirely on the Unity engine, the game delivers an immersive and action-packed experience. Using C for gameplay scripting, it features a modular code design that enhances maintainability and performance. Unity's animation and physics systems enable dynamic interactions and fluid shooting mechanics, bringing EPIC characters and their mythical journeys to life. By integrating traditional storytelling with innovative FPS mechanics,it ensures cross-platform compatibility and wide accessibility. Version control through GitHub and Plastic SCM streamlines collaboration, facilitating rapid iteration while maintaining high code quality. With scalable asset management strategies, the architecture supports an expanding game world without compromising performance. We believe the Mythical Mystery Game is well-positioned to attract a broad audience by leveraging cultural narratives in a modern FPS context, and we are seeking VC funding to support further development and effective marketing in the competitive gaming landscape.

TECHNICAL SKILLS

Languages: Python, Machine Learning (SKLearn, RNN Models), Linux, GitHub
Developer Tools: Unity, Intellj, VS Code, Android Studio
Data Model: COCO Model, Yahoo DataSets, Keras

EXTRACURRICULAR

- TATA-YUVA, NC Served as a Python (ML/AI) Instructor, sharing knowledge and expertise in technology.
- President of the Finance & Economics Club Led the club at Panther Creek High School, fostering interest in finance and economics among peers.
- Board Member Actively participated as a leader in the Technology Student Association, promoting STEM education.

CERTIFICATIONS

- Financial Market Certification by Yale University Focused on Finance and Technology Domains
- Python Course from Coursera
- Google Project Management Certification

EDUCATION

- Panther Creek High School {12 AP Courses } 2022 – 2026
- Wake Tech College {Accounting , Project Mgmt & Info System } 2024 – 2025