Tarun Kannuchamy

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EDUCATION

Vellore Institute of Technology(VIT)

Vellore, Tamil Nadu

Sept. 2020 - Present

Bachelor of Technology in Computer Science and Engineering Relevant Coursework:

Data Structures and Algorithms, Object Oriented Programming, Database Management, Operating Systems, Web Technology, Computer Architecture, Computer Networks, Natural Language Processing, Machine Learning

SKILLS

Languages: Java, Python, C/C++, SQL (MySQL), JavaScript, HTML/CSS, R

Frameworks/Libraries: PySpark, React, Node.js, PyTorch, Pandas, NumPy, Matplotlib, Plotly

Developer Tools: Git, Databricks, VS Code, Visual Studio, PyCharm, IntelliJ, Anaconda, Jupyter Notebooks, MS Word

Soft skills: Communication, Leadership, Analytical thinking, Problem-solving, Time Management, Adaptibility

EXPERIENCE

Data Engineering Intern

May 2023 – June 2023 Chennai, Tamil Nadu

 $BuSoft\ Tech$ - $Beyond\ Universe\ Software\ Technologies$

• Leveraged PySpark for efficient processing, analyzing and manipulation of large datasets.

- Wrote advanced SQL queries for data analysis, including data cleaning, aggregation, and filtering.
- Developed web scraping scripts to collect real-time data, curating and structuring datasets for actionable insights.
- Proficient in data visualization using tools like Streamlit, Pandas, Plotly, and Geopy to create interactive charts, graphs, and maps, facilitating effective communication of analytical findings.

Deep Learning Intern

May 2022 – Aug. 2022

KSV - Kaizen Secure Voiz

Chennai, Tamil Nadu

- Explored deep learning and ASR models, gaining valuable hands-on experience in their application and development.
- Acquired knowledge of text-to-speech conversion processes and techniques for transforming spoken audio into text.
- Analyzed the workings of ASR models, including speech recognition, language modeling, and decoding processes.
- Conducted a comprehensive evaluation of prominent ASR models, such as Deepspeech, Wav2Vec2, and Vosk, assessing their strengths, weaknesses, and potential applications.

Publicity and Outreach Head

Jan. 2022 – Dec. 2022

Institution of Engineering and Technology (IET)

Vellore, Tamil Nadu

- Handled media, publicity and outreach for the representation of a UK based student run chapter in college.
- Lead and guided a team of over 50 individuals, for media and publicity of the events conducted by the chapter.
- Designed timelines, reviewed work, presided over meetings and involved in planning

PROJECTS

Indian Company Registration - Analytics | PySpark, MySQL, Hadoop, WinSCP, Linux

June 2023

- Processed Indian company registration data since 1857 using PySpark and Databricks, extracting valuable insights
- Efficiently transferred files between Hadoop storage and local systems using Linux commands and WinSCP.
- Created interactive data visualizations with Streamlit and Matplotlib, facilitating easy comprehension of metrics.

Sports Highlights Generation | Python, NLTK, Firebase

April 2023

- Implemented text extraction and NLP text pre-processing for accurate retrieval of keywords from match commentary.
- Utilized TF-IDF vectorization and cosine similarity to measure keyword relevance and identify key moments in match commentary for highlight generation.

Multilevel Biometric Authentication | Azure Cognitive APIs, Javascript

April 2022

- Developed a user authentication system that utilizes combined voice and face data for enhanced security.
- Integrated Azure's cognitive APIs for voice and facial recognition to authenticate user identities.
- Created a user-friendly frontend interface for seamless account creation, login, and verification processes.

Publications

A Parallel approach to Generate Sports Highlights from Match Videos using Artificial Intelligence Manuscript submitted for publication.