Arvind Boominathan

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Computer Science Master's graduate with expertise in machine learning and cloud-based solutions. Experienced in developing web applications, AI/ML pipelines, and big data analytics. Passionate about impactful tech for healthcare and education.

Education

Lakehead University | MS Computer Science (GPA: 3.68/4.0)   *2023 – 2025*
Coursework: ML, Big Data, AI, Research Methodology, Ethical Issues (Computer Science)
Thesis: Integrating Multi-omics Data via Latent Space Construction for Bladder and Breast Cancer Analysis
- Utilized Graph Attention Networks and Deep Multiset CCA on TCGA datasets for Breast and Bladder Cancer Datasets

Vellore Institute of Technology | BTech Computer Science (GPA: 8.56/10.0)   *2019 – 2023*
Coursework: Data Structures & Algorithms, Operating Systems, Software Engineering, Web Programming, Data Analytics, Blockchain, Virtualization, Theory of Computation

Experience

Website Developer   Kochi, India
SBOA Public Senior Secondary School   Mar – Jun 2022
- Developed a **responsive website** using Bootstrap5, HTML, PHP and MySQL, enabling dynamic content management, student information display, and administrator-controlled updates.
- **Improved website SEO** performance by configuring Google Search Console for sitemap submission, indexing, performance monitoring and **trained 3 staff members** on the periodic maintenance of the website

Projects

Simplified Assignment Evaluation | *Bootstrap5, Firebase, Flask, Python*
- Developed an Automated Assignment Evaluation as a **team of 2** using role-based dashboards for instructors to create and evaluate assignments using NLP techniques like **BERT embeddings and cosine similarity** to assess assignment quality based on keyword relevance, semantic similarity, plagiarism detection, and submission punctuality, while allowing students to submit PDFs and view their scores.

YouTube Trending Video Analysis | *PySpark, Hadoop, MongoDB, Python, JSON, Java 8*
- Analyzed **over 45,000** Canadian YouTube trending video data by collaborating in a **team of 3** using a **3-node Hadoop cluster and PySpark**, extracting metadata and trends from Kaggle's YouTube dataset, storing enriched insights in MongoDB for scalable querying, and **identifying patterns in trending content** (e.g., categories, publish times, user engagement) to provide recommendations for content creators.

Multilingual Telehealth Diagnosis for Underserved Areas | *Bootstrap5, Flask, Python, MySQL*
- Developed a **multilingual telehealth chatbot** ("Med-easy") by supporting Indian languages (Tamil, Telugu, Malayalam, Kannada, Hindi) using **10 ML classifiers** (including Random Forest, SVM, and Naive Bayes) and integrated the best-performing models into a live diagnostic interface achieving **97% accuracy to predict diseases from user-reported symptoms** and recommend appropriate medical action based on severity.

Technologies

Languages: Java, C++, SQL, JavaScript, Python, R, Shell Scripting
Databases: MySQL, Firebase, MongoDB
Tools: Docker, VMware, Git, Hadoop, Spark
Cloud Technologies: AWS, GCP, SageMaker, GCP AI, DevOps, MLOps, TensorFlow

Certifications

- Cloud Computing for AI/ML: Certificate ⬈
- Front-End Web Development with React: Coursera ⬈
- Front-End Web UI Frameworks and Tools: Bootstrap 4: Coursera ⬈
- Server-side Development with NodeJS, Express and MongoDB: Coursera ⬈

Achievements

Finalist, Google Developer Student Club Hackathon | *Lakehead University*   *2023*
Guest Speaker, Career Guidance Program | *Government High School, Kumizhi, Tamil Nadu, India*   *2023*