Thirunaavukkarasu Murugesan

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EDUCATION

Stevens Institute of Technology | Hoboken, United States   **May 2023**
Master of Science in Computer Science

Anna University | Chennai, India   **May 2016**
Bachelor of Engineering in Computer Science and Engineering

SKILLS

Languages/Frameworks/Technologies: Java, Python, JavaScript, TypeScript, Node.js, Next.js, Tailwind, Hadoop, Kafka, C++, HTML5, Flask, React.js, Redux, GraphQL, SQL
Tools/DB/Cloud: PostgreSQL, MongoDB, Redis, Jupyter, Git, AWS (S3, EC2, VPC), Docker

WORK EXPERIENCE

Graduate Teaching Assistant   **August 2022 – Present**
Stevens Institute of Technology   **Hoboken, New Jersey**
- Worked as Graduate Teaching Assistant under **Prof. Shucheng Yu** for course **Applied Machine Learning**, holding office hours, clarifying students' questions, and grading students' mid-term exam and final project
- Working as Graduate Teaching Assistant under **Prof. Jingyi Sun** for course **Web Mining**, conducting office hours, clarifying students' questions, and grading students' mid-term and final project report and presentation

Graduate Research Assistant   **May 2022 – July 2022**
Stevens Institute of Technology   **Hoboken, New Jersey**
- Assisted **Prof. Jingyi Sun** in her research "**US Fortune 500's stakeholders engagement during the COVID-19 pandemic: Evidence for proactive approaches**" scrapping and mining data from social media platforms
- Examined how U.S. Fortune 500 companies discussed their COVID-19 pandemic CSR actions on Facebook, Twitter, and other social media platforms over 15 months' data and how the public responded to such messages

Software development Engineer   **February 2017 – July 2021**
HTC Global Services   **Chennai, India**
- Managed and worked in Tax applications with large DB2 tables (60-70 million records every month) to generate reports and send outbound files to different downstream areas, fetching data using IBM data studio by writing DB2 SQL queries
- Worked on transforming data intense application from Mainframe to AWS – changed large dataset and DB2 tables to change the job flow of the database operations, impacting up to 30+ teams at enterprise level
- Designed and implemented a dashboard utilizing Node.js and Express.js, with Postgres as the backend database. Integrated Chart.js and React.js for generating real-time graphs to monitor sensor data, resulting in a 72% reduction in manual workload and improved efficiency

ACADEMIC PROJECTS

Questionnaire – Q&A based discussion forum - Node.js, Express.js, Express-Handlebars, MongoDB
- Designed and developed a web application for a question-and-answer based discussion forum using Node.js + Express for the backend, MongoDB for the database, HTML5 + Bootstrap for the frontend design
- Added features for adding communities that contain questions, voting systems for providing upvotes and downvotes to the questions and answers and performing content moderation to remove spam & unhealthy content from the forum

Skills Match – Selenium, NLTK and BERT
- Scraped the Job data - Company, Location, Date, Job description from LinkedIn with selenium for a given job position keyword
- Used PDF Miner and NLTK python package to scrape the skillset from the resume and Job descriptions, applied text matching algorithms like Cosine similarity and BERT to find appropriate jobs for a given profile/resume

PageRank on Wikipedia pages - Hadoop
- Constructed a page rank algorithm to decide the importance of each webpage by assigning weighting value based on any incoming link to those webpages
- Implemented MapReduce to rank Popular Wikipedia pages with Iterative MapReduce. Used Amazon EMR & S3 as remote platform

Fable: Story telling web application– Node.js, Express.js, React.js, MongoDB, Material UI and Firebase
- Designed and developed a full-stack web application using Node.js + Express.js for the backend, React.js for the frontend and MongoDB as the database. Implemented user authentication using Firebase and text search using Elastic App
- Used Strapi and Cloudinary to build customizable backend services and manage application data in cloud.
- Utilized features for social storytelling where users can envision themselves as readers and authors, and provide their stories to the general public, free-of-cost

MEMBERSHIP AND ACTIVITIES

Member of Young Indian, Computer Society of India | **MAM College of Engineering**   **Trichy, India**
Most Valuable Player (2020) | **HTC Global Services**   **Chennai, India**