

Srikeerthi Srinivasan

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Experience

- ecohome.one LLC**, Seattle, WA | Software Developer 01/2025 - Present
- Engineered an end-to-end, voice-activated automation feature using an **Alexa Skill** front-end and an **LLM-powered data extraction pipeline** to parse e-receipts, **eliminating manual inventory addition to the app for users**.
 - Architected a scalable and cost-efficient **serverless back-end** using **Node.js** on **AWS Lambda** and **SQS** to ensure fault-tolerant, **asynchronous processing** of e-receipts, along with **secure OAuth 2.0 authentication** for user data protection.
 - TechStack**: *JavaScript, Node.js, AWS Lambda, AWS SQS, AWS API Gateway, RESTful APIs, AWS Secrets Manager, AWS CloudWatch, AWS Cost Explorer, LLM integration (Gemini), Git, Scrum, Agile, MongoDB*
- SEAR Lab, UTA**, Arlington, TX | Research Assistant 01/2023 - 12/2023
- Developed an interactive **Energy Poverty Map** by integrating federal energy burden (**LEAD**) and disadvantaged community (**Justice40**) datasets, using **spatial join analysis** in **ArcGIS Pro** to clarify funding eligibility for stakeholders.
 - Engineered a **computer vision pipeline** using **OpenCV** and **Matplotlib** to construct 3D neighborhood models from 2D historical maps, identifying building footprints and **features** through **template matching** and color analysis.
 - TechStack**: *Python, scikit-learn, OpenCV, Matplotlib, ArcGIS Pro, Numpy, Pandas, Research*
- Scientist Technologies Pvt Ltd**, Bengaluru, India | Machine Learning Engineer 05/2021 - 07/2022
- Engineered **AI Physio**, a **computer vision-based analytical pipeline** on **AWS**, to automate patient exercise validation for physical therapy, reducing **overall delivery costs by 5%** and **utilized by more than 1,000 users**.
 - Pioneered a **lightweight, custom object detection model** using **TensorFlow** to interpret medical device readings, achieving **95% accuracy** after pivoting from a complex, **inefficient OCR framework**.
 - Engineered a **scalable data ingestion pipeline** using **Python**, **Scrapy**, and **AWS EC2** to build a culinary database of 5,000+ recipes in **MongoDB**.
 - Deployed **custom crawlers** with **targeted HTML parsing** and **anti-bot mitigation** to enrich the data, which fueled a **nutrition-based recommendation system**.
 - TechStack**: *Python, OpenCV, Scrapy, AWS S3, AWS EC2, Git, Tensorflow, Pytorch, Blazepose, AlphaPose, Object Detection, Scrapy, MongoDB, Scrum, Agile*
- Nestle India**, Cherambadi, India | Intern 05/2020 - 06/2020
- Developed a **Google Sheets**-based tool for equipment maintenance reporting, **improving efficiency by 40%**.
 - Led training initiatives on tool usage, **boosting workforce productivity by 15%**.

Skills

- Programming Languages**: Python, JavaScript, C#, SQL
- Libraries & Frameworks**: Django, Flask, Node.js, Vue.js, Streamlit, Scrapy
- Databases & Tools**: PostgreSQL, MongoDB, DynamoDB, Docker, Git, GitHub, JIRA, Tableau, Unity 3D, ArcGIS Pro
- Cloud Platforms**: AWS (Lambda, SQS, S3, CloudWatch, API Gateway, Secrets Manager), GCP
- AI & LLM**: TensorFlow, PyTorch, Scikit-learn, Keras, NLTK, spaCy, OpenCV, LangChain, Semantic Search, OpenAI API
- Coursework**: Data Structures and Algorithms, Object-Oriented Programming, Artificial Intelligence, Machine Learning, Neural Networks, Big Data and Analytics, Cloud Computing, DBMS

Projects

- Candidate Search Application (HackUTA 2024)** [Github](#)
- Architected a **search engine** using **OpenAI embeddings** and a **FAISS vector index**, implementing **cosine similarity algorithms** to achieve **95% accuracy** in matching natural language queries against a candidate profile in **MongoDB**.
 - Developed a **full-stack, responsive application** with a **Streamlit UI** that enabled efficient recruiter workflows, including custom searches and detailed candidate summary reviews for initial screening.
- ETL Data Pipeline** [Github](#)
- Engineered an **automated, event-driven ETL pipeline** on **AWS** to process and validate raw data from **S3**, transforming and loading it into a **low-latency DynamoDB** table ready for downstream application consumption.
 - Secured the pipeline by integrating **AWS Secrets Manager** for credential handling and implemented robust logging and monitoring with **CloudWatch** to ensure **fault-tolerant and secure data processing**.

Education

- Master of Science in Computer Science** 07/2022 - 12/2024
The University of Texas at Arlington
- Bachelor of Engineering in Computer Science and Engineering** 07/2017 - 08/2021
Vidyavardhaka College of Engineering