Charan Srinivasan

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EDUCATION

Virginia Tech
Masters of Engineering in Computer Science, Concentration in Human Computer Interaction

Virginia Tech
Bachelor of Science in Computer Science, Minor in Mathematics

SPECIALIZED SKILLS

Programming Languages: Python, PyTorch, Java HTML/CSS, JavaScript, Typescript, C, C++, Scala, Prolog, Kotlin, SQL
Frameworks & Tools: Django, Node.js, React, Android Studio, Git/Github, Unity, Linux/Unix, Flask, MongoDB, Google Cloud Run, AWS, Hugging Face, REST API, Keras, Vision Transformer, Microsoft Power BI Platform
Technical Skills: Networking & System Protocols, Virtual Environments, AR Development, Machine Learning, Speech Recognition Integration, Natural Language Processing, Image Classification, Cloud Deployment, Database Management, Data Integration & Preprocessing, Full Stack Development, SAFe, SecDev*Ops*

WORK EXPERIENCE

Web Developer Intern, *Applica Solution*   **Feb 2025-May 2025**
Built a streamlined applicant portal using Power Apps. Implemented Power Automate flows to handle new submissions—triggering data extraction, sending confirmation emails, updating records, and alerting hiring managers. Then, developed an interactive Power BI dashboard to visualize key recruiting metrics (application volume, status breakdowns, source analytics), giving hiring teams instant, high-level insights.
- Increased number of weekly job applications by 15%

Web Developer Intern, *maka.AI*   **Jun 2023-Aug 2023**
Developed an educational website using Django and React to teach Python programming to K–12 students. Integrated a built-in Python interpreter to highlight syntax errors and allow real-time code testing. Collaborated in an Agile environment, participating in daily standups and biweekly sprint demos to present progress and incorporate team feedback.

Undergraduate Teacher Assistant, *Virginia Tech*   **Aug 2022-May 2023**
Assisted students with Java programming with a focus on object-oriented principles, data structures, and algorithms in Java. Conducted daily review sessions to provide feedback to improve student understanding and performance.
- Assisted over 60 students

PROJECT EXPERIENCE

Convo-Crafter
Developed a Slack bot built with TypeScript and the Slack API to streamline meeting management for Boeing teams. Implemented features for creating and scheduling meetings, managing agendas, assigning action items, and enabling discreet flow control during discussions. Automated post-meeting reminders and personalized action item tracking to improve team accountability and follow-up efficiency.
- Worked with Boeing managers and had weekly standups to discuss our teams status and a final presentation to show off our work.

Shark Detection Model
Developed a shark image classification system leveraging a Vision Transformer (VIT) model to identify sharks, their genera, and species. Consolidated validation data from multiple social media sources into a PostgreSQL database to enhance training datasets. Migrated the R-based training scripts to Python with Keras and Tensorflow, implementing a fine-tuned ViT model with dynamic output layers and data augmentation. Optimized training with early stopping, adaptive learning rates (Rectified Adam), and strict class balancing based on genus and species thresholds, following published research methodology. Used CronJob to schedule automated data consolidation and model training.
- Successfully deployed the model and achieved significant accuracy improvement from 41% to 72%

SpeakSafe
Built a real-time hate speech moderation tool for Discord, featuring a bot built with Discord.js that transcribes voice chat using the Wit.AI API. Transcribed speech is checked against a user-defined blacklist stored in MongoDB, managed via a custom Flask web interface. If cleared, the text is sent to a Google Cloud-hosted API running the Pysentimiento hate speech detection model from Hugging Face. Users producing flagged content are automatically removed from the call, ensuring safe and respectful communication.
- Won award for "best use of MongoDB" and "best design"