Guru Nanma P

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EDUCATION

University Of Illinois Urbana-Champaign   Urbana, Illinois
Master of Computer Science; GPA: 4.0/4.0   *Aug 2022 – Dec 2023*

BMS College of Engineering   Bengaluru, India
Bachelor of Engineering - Computer Science; GPA: 9.34/10.0   *Jul 2018 - Jun 2022*

SKILLS SUMMARY

- **Programming Languages:** Python, C, C++, Java, Kotlin, PHP, SQL, JavaScript, TypeScript
- **Web Technologies:** HTML5, CSS, jQuery, React, React Native, Three.js, REST APIs, Node.js, Express.js
- **Databases & Tools:** MySQL, SQLite, NoSQL: (MongoDB, Firestore), GIT, Android, Postman, Screwdriver CI/CD, Docker
- **Frameworks:** AWS (DynamoDB; EC2; S3; Cloudformation), Flask, OpenCV, TensorFlow, Maven, Hadoop, Fast API

EXPERIENCE

Yahoo Inc.   Jun 2023 – Aug 2023
Software Developer Intern   *Remote, USA*
- Developed and deployed a DynamoDB scanning application specifically for scheduled events job reporting in Yahoo Mail
- Optimized Yahoo's Enterprise Scheduling system, resulting in a 40% increase in reporting efficiency
- Implemented application coding, unit testing, CI/CD pipeline setup, and deployed infrastructure to AWS platform
- Utilized technologies such as Java, Maven, AWS services to build an infrastructure supporting 30,000+ daily events

University of Illinois Urbana-Champaign   Dec 2022 – Present
Graduate Research Assistant under supervision of Dr. Lawrence Angrave   *Urbana, Illinois*
- Designed and launched an offline-compatible Speech-to-Text application, leveraging OpenAI's Whisper and ReactJS to improve communication access for deaf users by 95% in low-connectivity areas
- Developed a React Native app to host a deep learning model, enabling accurate 3D pose estimation of medical equipment and contributing to enhanced safety and effectiveness in medical settings

Cisco   Feb 2022 – Jul 2022
Software Developer Intern   *Bengaluru, India*
- Built a Drag-and-Drop feature for Cisco's BotLite app using ReactJS, resulting in 50% increase in user satisfaction metrics
- Custom-designed the GUI on Figma and leveraged React Flow and Bootstrap for building 10+ UI functionalities
- Utilized Python's FastAPI framework and built 40+ backend APIs for asynchronous calls to the MongoDB backend resulting in a 30% improvement in user request response time

Samsung Prism   Jan 2020 – Aug 2020
Research & Development Intern   *Bengaluru, India*
- Achieved quadruple speed of video recording framerate on phones using C++
- Utilized advanced Computer Vision algorithms, notably block-matching and frame interpolation techniques
- Improved computational efficiency through algorithmic tweaks like adaptive thresholding and temporal redundancy removal
- Earned the Certificate of Excellence for achieving industry-leading compilation time, highlighting code efficiency.

PROJECTS

- **Gesture Controlled Story Telling Web App**
  - Leveraged gesture recognition using OpenCV and Three.js to craft an immersive storytelling web application tailored for educational contexts. By placing one's hand in front of the webcam, users can intuitively interact with the 3D visual environment on the screen using various hand gestures. This application was built utilizing technologies such as HTML, CSS, JavaScript, Express.js, Three.js, OpenCV, and Python. Github Repo

- **Technology Conference React Native App**
  - Spearheaded the development of a mobile app for the College tech conference, boosting user engagement through Expo's push notifications and permission features
  - Boosted real-time user interactions by 50% with a Flask-hosted backend, facilitating seamless HTTP requests to ML recommendation model, data processing, and MongoDB integration. App link

- **Aura - Emotion Recognition based Music and Movie Recommendation Android App**
  - Developed personalized recommendation algorithms for movies and music using Content-based filtering and k-means clustering, as well as a custom CNN model for emotion recognition.
  - Deployed all machine learning models on a Flask backend for rapid HTTP interactions and implemented 10+ UI functionalities for an enhanced user experience.Github Repo

RESEARCH WORK & PUBLICATIONS

- Cognitive Autonomous Underwater Vehicle with Soft Robotic Arms and Android App to autonomously control it Bot Demo
- Using Deep Learning and Augmented Reality to Improve Accessibility: Inclusive Conversations Using Diarization, Captions, and Visualization Paper Link
- TP-Detect: trigram-pixel based vulnerability detection for Ethereum smart contracts Paper Link
- Bald Eagle Search Algorithm for High Precision Inverse Kinematics of Hyper-Redundant 9-DOF Robot Paper Link