SIDDHARTH SINGH RANA

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EDUCATION

Graphic Era Hill University - CGPA: (9.15/10) — Dehradun, India
Bachelor of Technology in Computer Science and Engineering — *Aug. 2021 – May 2025*

St. Joseph's College - Percentage: (88/100) — Nainital, India
12th(Indian School Certificate) — *Aug. 2020 – May 2021*

St. Joseph's College - Percentage: (90/100) — Nainital, India
10th(Indian Certificate of Secondary Education) — *Aug. 2014 – May 2019*

EXPERIENCE

Software Engineering Intern — September 2023 - December 2023
Meta(Facebook), Major League Hacking — *Remote, New York, NY*
- Attained 100% accuracy by aligning Perl and Python scripts through bash tests and regex corrections. 🔗
- Created a laser encoder implementation, demonstrating its functionality to users. 🔗
- Eliminated redundancy in Laser Supported Language dictionaries, ensuring accurate language representation. 🔗
- Implemented validation slow test to verify language models' availability and alignment. 🔗
- Fixed key error in LaserEncoderPipeline, ensuring functionality for various languages, including English. 🔗

PROJECTS

The Feedback Loop | *Chakra UI, React JS, Express, Node JS, MongoDB, Keras, Flask* ⚬
- Implemented Multer for secure video upload & JWT for authentication.
- Analyzed video trends & compared audio/visual elements for insights.
- Delivered personalized video feedback on strengths & improvement areas.

Telegram Chat Bot for Bank Users | *MongoDB, Python, Keras, Docker, PyTorch, Matplotlib, LASER, Google Translate* ⚬
- Enhanced communication efficiency with Natural Language Processing (NLP), supporting multiple languages.
- Utilized MongoDB as a secure back-end solution for robust user data management.
- Deployed as a Docker container to ensure seamless integration and scalability.

Go Link Tree | *MongoDB, Golang, React JS, Chakra UI* ⚬
- Built high-performance Go backend with JWT for secure, faster login compared to Node.js.
- Implemented user-friendly link management system for easy storage and retrieval.
- Developed streamlined UI for efficient access to stored links, improving user experience.

MERN Stack-based Chat Application | *MongoDB, React JS, Express, Node JS, WebSocket* ⚬
- Developed a modern and interactive chat application using the MERN stack.
- Enabled seamless communication in real-time using websockets, enhancing user experience.
- Implemented secure login standards in Node.js to ensure user security.

Hashtag Finder - API based Instagram Hashtag Finder | *Express, ReactJs, NodeJs, Axios* ⚬
- Employed the Facebook Graph API to gather hashtags from top posts on Instagram.
- Enhanced content discovery and engagement.

Chrome Extension for Text Summarization using BERT | *Python, Django, BERT, HTML, CSS, JavaScript* ⚬
- Utilized Google BERT for real-time text summarization, enhancing user productivity.
- Integrated as a Chrome extension for easy and accessible text summarization.

DBMS based Student Management Desktop Application | *MySQL, Java Swing, Java* ⚬
- Developed a desktop application for educational institutions, serving as an information portal.
- Implemented user management and access levels for enhanced data security.
- Designed separate login systems for administrators and users to ensure privacy.

TECHNICAL SKILLS

Languages: Java, Python, Go, SQL, Bash, C/C++, HTML/CSS, JavaScript
Frameworks: React, NodeJS, Flask, Django, Spring Boot, PyTorch, TensorFlow
Databases: MongoDB, MySQL, PostgreSQL, Oracle DB
Tools & Platforms: Git, Github, Microsoft Azure, Amazon AWS, Docker, Nginx
Other Skills: Linux, NLP, CI/CD, DevOps, Web Sockets

PUBLICATIONS

Deep Learning-Based IoT Malware Detection Using CNN and Transfer Learning: A Comparative Study   ⸙
Led IoT malware research using image models like VGG16, achieving 95.6% accuracy and 85% precision. Im- plemented Keras pre-trained models for enhanced image classification. Proficient in IoT security, deep learning, Keras, and Python.

Decoding the Textual Symphony: A Comparative Study of RNN, LSTM, and GRU Architectures for Sequential Text
Conducted in-depth research comparing RNN, LSTM, and GRU architectures for sequential text analysis, show- casing expertise in language modeling and sequential data processing.

ACHIEVEMENTS

Coding Competition Success

Achieved the top position in the Code-Chaos competition, organized by IEEE, showcasing exceptional coding skills and abilities.

Coding Proficiency

Demonstrated strong technical skills by completing over 350+ coding challenges on Leetcode and 80+ challenges on GeeksForGeeks.

CERTIFICATES

- Git Essential Training: The Basics   **in**
- Google Cloud Foundations   **G**
- Machine Learning, Data Science and Deep Learning with Python   ⸙
- Learning Docker (2018)   **in**
- Google Cloud Data and Storage Foundations   **G**
- Learning Google Cloud Security   **G**
- Secure coding guide for Developers, Analysts and Architects   ⸙
- Data Structures and Algorithms: Deep Dive Using Java   ⸙
- Introduction to bug bounty hunting and web application hacking   ⸙