

Chitturi Purna Chandra Sekhar

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INTERNSHIP EXPERIENCE

Software Development Intern
Avantel Ltd.

August 2024 – March 2025
Hyderabad, A.P

- **Collaborated** with cross-functional teams to develop **GUI applications** using **PyQt5**, **Tkinter** enhancing user experience and system efficiency.
- **Contributed** to the development of **geospatial data applications**, enabling seamless **TIF-to-shapefile mapping** for advanced spatial analysis.
- **Designed and implemented** an **SNMP-based Java application**, integrating **MIB file processing**, **request-response handling**, and **network device management**, optimizing network monitoring capabilities.
- Consolidated geospatial data from 10+ sources into a streamlined offline routing system using **GraphML**, enabling field technicians to access critical navigation information without internet access.
- **Engineered and deployed** a **full-stack HRMS web application** using **Spring Boot**, **JavaScript**, **HTML**, and **CSS**, streamlining human resource management workflows and enhancing operational efficiency.

PROJECTS

A Novel Chromatic-Based Cryptocipher with Cryptanalysis(Cryptography)

- Introduces a novel color-based encryption system leveraging chromatic principles for secure data transmission.
- Utilizes a **dynamically generated fixed-size 10×10 color palette** as the cryptographic key, enhancing resistance to brute-force attacks.
- Converts plaintext into complex ciphertext through a structured chromatic transformation process, employing a Feistel structure-based approach to balance security and computational efficiency.
- Ensures enhanced data security with dynamic color mapping techniques suitable for digital communication, while incorporating cryptanalysis to evaluate the cipher's robustness against various attacks.
- **Tech Stack:** Python — NumPy — Flask — JSON — Pillow.

Rental Application (Web Development)

- Developed a **comprehensive rental platform** with distinct roles for **Admin**, **Host**, and **Guest** users.
- Enabled hosts to **list properties** with details and photos, manage listings, and streamline temporary rentals.
- Implemented features for guests to **browse, view, and book properties** for normal, monthly, or bulk bookings.
- **Tech Stack:** Java — Spring Boot — JSP — Bootstrap — JSTL — MS-SQL — jQuery — Hibernate.

CloudNet: LiDAR-Based Face Recognition Model Robust Against Light Variation (ML)

- Designed a **multi-modal 3D face recognition model** using **RGB**, **depth**, and **LiDAR point cloud data**.
- Trained a **Cloud-Net model** with **cross-entropy loss** and **Adam optimizer**, achieving **91% accuracy**.
- Engineered a user-friendly graphical interface using Tkinter that provided real-time visualization of 3D face recognition inference results, enhancing user understanding of model performance.
- **Tech Stack:** Python — NumPy — Pandas — Torch — Seaborn — Tkinter.

ProcurementPlatform(Web Development)

- Developed a **role-based procurement management system** with modules for **Admins**, **Buyers**, and **Vendors**.
- Implemented key features including **real-time inventory tracking**, **quotation creation**, **bid submission and evaluation**, and **Material Issue Requisition (MIR)** processing.
- Ensured **real-time updates and notifications** to improve communication and operational efficiency across all user roles.
- **Tech Stack:** Java — Spring Boot — JSP — Bootstrap — JSTL — MS-SQL — jQuery — Hibernate.

EDUCATION

Year	Degree/Examination	Institute/University	%/CGPA
2025	B.Tech in Computer Science	Velagapudi Ramakrishna Siddhartha Engineering College	8.75/10
2021	Intermediate (12 th)	Sasi New Gen Junior College, Velivennu	97.8%
2019	SSC (10 th)	Z.P.H.S Govt High School	9.3/10

TECHNICAL SKILLS

Programming Languages: C++, JavaScript, Java, Python, C, SQL.

Technologies/Frameworks: HTML, CSS, MongoDB, Flask, Spring, PyQt5, Tkinter.

Developer Tools: Git, VS Code, Spring Tool Suite, Postman, Jupyter Notebook, Eclipse-IDE, QGIS.

Soft Skills: Team Leading, Critical Thinking, Time Management, Creativity.

- Solved over **600+ problems** on LeetCode and GeeksforGeeks.

- Earned a **Gold Badge** in Python and C on HackerRank.

CERTIFICATES

- CCNAv7: Introduction to Networks – Cisco
- Cybersecurity Essentials – Cisco
- IBM Data Science – IBM
- Programming Essentials in Python – Cisco
- NPTEL: R Software – NPTEL

ROLES AND RESPONSIBILITIES

- Organized and executed the “**Start-Up Conclave**”, an innovation-focused event promoting entrepreneurship among 200+ students, enhancing exposure to startup culture and ideation.
- Orchestrated all logistics for a 24-hour inter-college hackathon with 15 teams, earning recognition from faculty for flawless execution and boosting student participation by 60%.
- Led a **Cybersecurity Awareness Campaign** for school students, designing engaging sessions and educational materials to promote safe online practices and digital hygiene.
- Coordinated a **college fest**, ensuring smooth participation of students.

EXTRA-CURRICULAR ACTIVITIES

- Represented college in inter-college basketball tournaments, securing the runner-up position, demonstrating strong teamwork, discipline, and competitive sportsmanship.
- Captained school Kabaddi team to victory at the zonal-level championship, showcasing leadership, strategic planning, and team coordination under pressure.

PUBLICATIONS

- Chitturi Purna Chandra Sekhar, “**Infrared-Based Facial Recognition in Low-Density Populations with a Customized FaceNet Approach**”, accepted in IAENG International Journal of Computer Science, 2025.
- Chitturi Purna Chandra Sekhar, “**Human Activity Recognition Using Conv-LSTM with Infrared Camera Surveillance**”, accepted at the 3rd International Conference on Advancement in Computation Computer Technologies (InCACCT), 2025. (Conference Presentation Accepted)