SOHAM TRIPATHY

+91 8919673304 | soham4net@gmail.com
linkedin.com/in/sohamtripathy/ | github.com/SOHAM-3T
Hyderabad, Telangana - 500058, India

OBJECTIVE

Aspiring Computer Science student with a strong foundation in algorithms, data structures, and big data analytics. Passionate about solving complex computational problems and optimizing large-scale systems. Seeking opportunities to apply theoretical knowledge in real-world scenarios through research and development in algorithms for big data. Enthusiastic about contributing to innovative projects and expanding expertise in algorithmic analysis and graph theory.

EDUCATION

- **National Institute of Technology Andhra Pradesh** *August 2023 - July 2027*
  BTECH in Computer Science and Engineering Tadepalligudem, Andhra Pradesh
  - GPA: 9.56
- **Sri Chaitanya Junior College** *June 2021 - June 2023*
  Pre-University Education LB Nagar, Hyderabad
  - Grade: 99.2%
- **Sri Chaitanya Techno School** *2017-2021*
  Secondary Education LB Nagar, Hyderabad
  - GPA: 10/10

PROJECTS

- **Learning Management System** *January 2025 - Present*
  Tools: Python, Django, PostgreSQL, HTML, CSS, JavaScript, Figma
  - Developed a **web-based quiz platform** to conduct **weekly quizzes** with unique question sets for each student.
  - Implemented a **percentile-based evaluation method** to assess student performance fairly and efficiently.
  - Created a **plagiarism detection system with webcam monitoring**, ensuring integrity during online assessments.
  - Applied **PostgreSQL for secure result storage and retrieval**, enabling faculty to analyze student performance over time.
  - **Project Mentor :** *Dr. Nagesh Bhattu, Assistant Professor and HOD, CSE Department*
- **Netflix Movies Data Analysis** *August 2024*
  Tools: Python, NumPy, Pandas, Matplotlib
  - Analyzed **Netflix movie release trends** to determine the number of films released before 1999.
  - Implemented **data processing and visualization techniques** to extract meaningful insights from the dataset.
  - Created **interactive charts and graphs** to illustrate trends in movie releases over time.
- **Automated Grade Evaluation System** *October 2024*
  Tools: Python, PostgreSQL, Pandas, Matplotlib
  - Developed a **grading system** that evaluates student performance using a **relative grading system**.
  - Implemented **automated CSV file processing** to calculate grades dynamically and update records in real time.
  - Created a **graphical analysis dashboard** to visualize student performance trends and insights.
  - Applied **PostgreSQL for efficient data storage and retrieval**, ensuring seamless integration with academic records.
- **Big Data Algorithm Analysis** *November 2024*
  Tools: Python, C++, Apache Spark, Hadoop, NumPy, Pandas
  - Developed and optimized **large-scale algorithms** for Big Data processing, analyzing datasets with **100M+ records**.
  - Implemented **parallel processing techniques (MapReduce, Apache Spark)** to improve algorithm efficiency.
  - Created **comparative performance analysis** of sorting, searching, and graph algorithms to assess scalability. .
  - Applied **algorithmic complexity analysis** to evaluate and enhance execution time.
- **Graph Theory in Real-World Networks** *December 2024*
  Tools: Python, NetworkX, Neo4j, SQL, Matplotlib
  - Designed and implemented **graph analytics solutions** to model **real-world networks** like **social connections and traffic flow**.
  - Applied **shortest path algorithms, PageRank, and clustering techniques** to extract meaningful insights.
  - Created **interactive visualizations** using Matplotlib to analyze network structures
  - Utilized **Neo4j graph database** for efficient query execution and graph traversal.

Relevant Coursework

- **2nd Semester:** Programming and Algorithmic Thinking
- **3rd Semester:** Digital Logic Design, Discrete Mathematics, Data Structures and Algorithms, Operating Systems
- **4th Semester:** Object Oriented Programming, Data Base and Management Systems, Design and Analysis of Algorithms, Computer Organization and Architecture, Theory of Computation.

Skills

- **Programming Languages:** C, C++, Java, Python, SQL, x86 Assembly, ARM Programming
- **Web Technologies:** HTML, CSS, JavaScript, Django, Figma, Tailwind CSS
- **Database Systems:** PostgreSQL, MongoDB, SQLite
- **Data Science & Machine Learning:** NumPy, Pandas, Matplotlib, OpenCV, Apache Spark, Dask
- **Cloud Technologies:** Google Colab, Kaggle Notebooks
- **DevOps & Version Control:** Git, GitHub, Docker
- **Mathematical & Statistical Tools:** Linear Algebra, Probability, Statistics, Data Visualization
- **Other Tools & Technologies:** Neo4j, NetworkX

Achievements

- **Academic Achievement** *April 2023*
  Intermediate Public Examination, TSBIE
  - Secured a score of **992/1000** in the exams
- **Competition Achievement** *October 2023*
  Algo University Technology Fellowship(ATF), Algo University
  - Secured myself in the top 7 Percentile of the ATF Stage II Round
  - Applied my knowledge of Data Structures and Algorithms to demonstrate strong programming skills in Java and Python.
- **Competition Achievement** *December 2024*
  Codeweek, HackerRank in collaboration with the CSE Association of NIT Andhra Pradesh
  - Ranked 1st among 250+ second-year students across all departments
  - Utilised my problem solving skills along with programming skills in C++ and Python.

Certifications

ATF Stage II Candidate, *Algo University*

Mastering Data Structures using C,C++, *Abdul Bari - Udemy*

Basics of Web Development, *Microsoft Learning*

Associate Data Analyst, *DataCamp*

Additional Information

Languages: English, Hindi, Telugu
Interests: Competetive Programming