Aakansha Sigar

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EDUCATION

- **Indian Institute of Technology, Kharagpur** — July 2020 - June 2022
  Master of Science - Mathematics; GPA: 8.84 — Kharagpur, India
  Courses: *Graph theory and Algorithms, Liner Algebra, Cryptography and Network Security, Probability and Statistics, Databases*

- **University of Delhi** — July 2017 - June 2020
  Bachelor of Science(Honors) - Mathematics; GPA: 9.48 — Delhi, India

SKILLS SUMMARY

- **Languages**: C++, Python, Golang, Bash
- **Software**: Siemens NX, Teamcenter, Visual Studios, GIT, Polarion, Vim
- **Platforms**: Windows, Linux
- **Soft Skills**: Leadership, Event Management, Writing, Public Speaking

EXPERIENCE

- **Siemens DISW** — July 2022 - Present
  Software Engineer — *Pune, India*
  - **Assemblies Visualization Project**: Collaborated on a key project in NX-Assemblies team with 8 cross-functional teams across 3 release cycles, contributing to a early release project delivery. Facilitated the integration of Standard Visual Materials within multi-level assemblies
  - **Assemblies Small Strategic Customer Enhancements**: Managed customer enhancements, delivered robust assistance in loading Datum Coordinate Systems, accommodating 3 PMI configurations, 5 loading preferences and 2 NX environments within the monolithic Jts
  - **Facet to Parasolid (Classic/Convergent/Hybrid)**: Implemented a cutting-edge data integration system that imported Facetted data from diverse CAD platforms as Parasolid, leveraging advanced analytics to derive valuable insights and optimize operational efficiencies by 50%
  - **NX-QueryWord Tool**: Developed a CLI tool using Golang with a streamlined search experience in the NX codebase. Improved 40% productivity by allowing users to search specific words and obtain comprehensive results
  - **Performance Analysis Tool**: Designed and programmed a performance analysis automation tool to streamline regression detection, enabling targeted identification and prioritization of critical issues, reduced man hours by 65%
  - : Managed four features within Siemens NX CAD software. Mentored and guided 3 interns to proficiency in NX software. Resolved 70+ problem reports, contributing to overall enhancement of software functionality and user experience

PROJECTS

- **Rainbow Signature Scheme (Advancing Security in Multivariate Cryptography)**: Implemented a signature scheme using Python centered on solving a set of random multivariate quadratic systems(NP-hard problem), resulting in a 20% increase in efficiency for both signature generation and verification processes
- **Marking Scheme based on Performance Time**: Developed a Python tool to automate grade calculations based on performance time, resulting in a 45% reduction in manual hours

CERTIFICATION

- **Specialization Certificate in Algorithms(Stanford University, Coursera)** :
  - Divide and Conquer, Sorting and Searching, and Randomized Algorithms
  - Graph Search, Shortest Paths, and Data Structures
  - Greedy Algorithms, Minimum Spanning Trees, and Dynamic Programming
  - Shortest Paths Revisited, NP-Complete Problems

- **Design Patterns in Modern C++** : SOLID Design Principles, Creational Design Patterns

- **Linux OS(Illinois Tech, Coursera)** : Linux, Command-Line Interface, Linux File Systems

- **Python Data Structures(University of Michigan, Coursera)**: Data Structure, Python Syntax And Semantics

ACHIEVEMENTS

- Winner at PES-Innovations 2023 at Siemens DISW
- Awarded with Inspire Scholarship — July 2017 - June 2022
- Awarded with Gargi Scholarship — July 2015 - June 2017