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# RAHUL SETH

○ GitHub    in LinkedIn    ⚲ Gurgaon, Haryana

## EDUCATION

**Trinity College, Dublin**                                                                                    Ireland
*BAI Computers and Electronics Engineering*                                                     *2018–2022*
**Dissertation: "Surveying Long-Term Cryptographic Keys in Ireland"** | *GitHub*
- Developed, refactored code for a network data application to scan, mine data from 20,000 Irish mail servers
- Researched encryption key sharing in mail server infrastructure, leveraging Python for data analysis and development on Linux
- Analyzed JSON metadata using Python on Linux, presenting results with custom node-based graphs, showing 52% public key sharing

## WORK EXPERIENCE

**Baker Hughes**                                                                                             Ireland
*Software Engineer*                                                                               *Mar'23 – Present*
- Worked in a cross-functional team to revitalize legacy oxygen sensor software, focusing on improving human-machine interface (HMI)
- Designed, developed HMI in C, IAR, with over 10+ features like password entry, validation, numeric input, customizable dashboard
- Contributed to system functionality and user interaction by integrating bootloader, linking Data Manager with HMI
- Implemented a CI/CD workflow utilizing Parasoft on GitHub, ensuring MISRA compliance and significantly reducing rework by 30%
- Developed Python script to convert images to C hex arrays, saving 2 hours/feature. Standardized design practices across the SW team

*Graduate Software Engineer*                                                                  *Aug'22 – Mar'23*
- Developed HMI emulator in C (WIN32) for debugging, accelerated feature dev, delivered as standalone application for client training
- Optimised Agile board by decomposing EPICS, user stories into tasks and coordinating sprints; boosted timely delivery by 25%
- Documented test cases and code architecture, contributed to design reviews and handled changing of requirements in SW

**Ericsson**                                                                                                   India
*AI/ML Intern*                                                                                     *Jun'21 – Aug'21*
- Analysed large datasets; applied ML models like Linear Regression, Decision Trees, and AdaBoost for predictive analysis
- Utilised 5 performance metrics including recall, f1score, precision, accuracy and ROC curves to assess the performance
- Applied K-Means algorithm on the historical IT dataset; hyper-tuned the model using elbow curves, and silhouette method(s) to identify optimal clusters

**Lepton Software**                                                                                            India
*Market Research Intern*                                                                          *Jun'19 – Aug'19*
- Leveraged advanced Excel functions like vlookups, pivot tables, and sorts to perform in-depth analysis of 5G market data
- Presented to stakeholders a strategy on how Lepton can differentiate itself from competitors by leveraging services they offer

## PROJECTS AND ACTIVITIES

**BCG Gamma Experience**                                                                                     Virtual
*Data Science*                                                                                            *Jun'23*
- Enhanced understanding of problem-solving processes and working with challenging data analysis tasks
- Developed practical experience in business problem framing, exploratory data analysis, feature engineering, predictive modeling, and turning insights into business decisions

**Formula Trinity AI**                                                                                        Ireland
*State Estimation and Path Planning*                                                              *Nov'20 – May'22*
- Improved sensor data accuracy in autonomous racing car systems by implementing Particle and Kalman filters for noise reduction
- Optimized racing line selection using A* and Dijkstra's algorithms for maximum performance and speed in autonomous racing cars
- Mentored recruits in Python, ROS, and state estimation algorithms, enabling their seamless integration into the team

**Email Client**
- Designed an email client for macOS (Unix) architectures; incorporated features like login, search, compose and schedule send
- Implemented the backend and API calls using Python and utilized Kivy for UI design

## SKILLS

**Programming:** Python, C, C++, JavaScript, SQL, XML, Git, Matlab, Verilog, R, Static Analysis, TeX
**Technologies:** IAR, Parasoft, PostgreSQL, Visual Studio, Linux, Wireshark, SPSS, Protoge, MS Office, AWS EC2