RAHUL SETH

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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 among mail servers, leveraged **Python** for data analysis and development on Linux
- Analyzed JSON metadata using Python on Linux, **modelled data** 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; focussed on enhanced human-machine interface (HMI)
- Managed 20+ SW changes as **'translator'** between product management and development with a customer centric approach
- Designed, developed using C (OOP) with over 17 features like password entry, validation, numeric input, customizable dashboard
- Developed Python scripts to convert images to C hex arrays, saving 2 hrs/feature. Standardized design practices across the SW team
- Created knowledge wikis on processes related to the use of repositories and toolchains for automation
- Implemented DevOps CI/CD workflow utilizing Parasoft on GitHub, ensuring MISRA compliance; reduced rework by 30%

Graduate Software Engineer   *Aug'22 – Mar'23*
- Leveraged Win32 to architect, develop an HMI simulator as Windows app; resulted in 40% acceleration in feature dev process
- Optimised **JIRA** board by decomposing EPICS into user stories and tasks and coordinated sprints; boosted timely delivery by 25%
- HW Emulator, selected for client training, deployed across 3 projects; established as skeletal repo to bolster collaboration
- Documented test cases, code architecture, contributed to code reviews and handled chaning of requirements in SW
- Integrated HMI with device using Modbus, HART, and RTOS, managing data reading and writing operations

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 a Tableau dashboard to stakeholders, highlighting Lepton's competitive differentiation through its unique services

PROJECTS AND ACTIVITIES

BCG Gamma Experience   **Virtual**
Data Science   *Jun'23*
- Gained insight into enhanced decision-making by using Python visualize KPIs such as churn, forecasting, factors influencing chrun
- Conducted data analysis, feature engineering, and report generation for client projects; exposed to data lakes, ETL using SQL

Formula Trinity AI   **Ireland**
State Estimation and Path Planning   *Nov'20 – May'22*
- Developed Python-based simulator to visualise workings of Kalman, Particle filters in analyzing car sensor data like speed, yaw angle
- Integrated estimation algorithms for localizing, mapping a racing map, enabling path planning team to determine the racing line
- Implemented agile methodologies, leveraged Git for code management, established workflows; enabled test driven development

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 utilised Kivy for GUI/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, Docker