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 a network scanner to identify and survey mail servers in Ireland; mining their cryptographic data
- Extracted TLS/SSH session metadata using custom-made JSON schema and processed it using Python
- Modelled public key sharing for 20000 hosts across all standard ports by clustering on SHA-256 fingerprint

WORK EXPERIENCE

Baker Hughes — Ireland
Software Engineer — *Mar'23 – Present*
- Played key role in product development; aimed at modernizing a legacy oxgyen sesnor with enhanced UI/UX.
- Spearheaded the design and development of the product's LCD interface, implementing sophisticated navigation algorithms and establishing robust code architecture.
- Led initiation of CI/CD GitHub pipeline using Parasoft; automated code analysis and reduced rework by 29%.
- Handled bootloader integration and linked Data Manager with HMI, bolstering system functionality and user interaction.
- Established standardized product design practices with other Engineers, developing a globally accessible Python-based icon library to unify visual elements across all products.

Graduate Software Engineer — *Aug'22 – Mar'23*
- Developed an HMI emulator for testing and client training, saving development time and reducing hardware needs.
- Authored Python scripting for automation of tasks like bitmap to C conversion and batch builds, saving 3 hours per feature.
- Optimised Agile boards by decomposing user stories into tasks and coordinating sprints; increased productivity by 8%.

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 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 — Virtual
Data Science — *Jun'21 – Aug'21*
- 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.

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 UI design

Formula Trinity — Ireland
State Estimation and Path Planning — *Nov'20 – May'22*
- Implemented Kalman and Particle Filters to minimise data noise and localise racing map for usage by other teams.
- Led state estimation team of 5; utilised data from 3 sensors on the autonomous car to determine the car's position on tracks.

SKILLS

Programming: C, C++, Python, SQL, XML, Git, Matlab, Verilog, JavaScript, R, Static Analysis, OOP
Technologies: GitHub, IAR, Parasoft, PostreSQL, Visual Studio, Linux, Wireshark, SPSS