



# Rahul Seth

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## EDUCATION

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### Trinity College, Dublin

BAI Computers and Electronics Engineering

Ireland

2018 – 2023

#### 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

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### Baker Hughes

Software Engineer

Ireland

Mar’23 – Present

- Played key role in product development; aimed at modernizing a legacy oxygen sensor 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 – March’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

ML Intern

India

June’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

Market Research Intern

India

June’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

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### BCG Gamma

Data Science

Virtual

June’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
- Utilised Docker container to package the application for simplified distribution and accessibility in opensource

### Formula Trinity

State Estimation and Path Planning

Ireland

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.

### Trinity Indian Society

Vice President

Ireland

Sep’18 – June’19

- Led a team of 10 dealing with logistics for organising Indian cultural events like Holi and Diwali
- Participated in funding pitches and won a 350 Euro grant from BOI used for marketing campaigns.

## SKILLS

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**Programming:** C, C++, Python, SQL, XML, Git, Matlab, Verilog, JavaScript, R, Static Analysis, OOP

**Technologies:** GitHub, IAR, Parasoft, PostgreSQL, Visual Studio, Linux, Wireshark, SPSS