



# Karan Manghnani

Computer Science & Engineering  
Student

## PROFILE

I have recently obtained my master's degree in Computer Science and Engineering from Instituto Superior Técnico. I specialized in Cyber-Security and Information Systems, and my thesis consisted of implementing a tool that extracts and presents fake news indicators to news consumers. I am a hard-working person who has developed a passion for Software Engineering and Problem Solving over time, which motivated me to work on personal projects.

## CONTACTS



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## LANGUAGES

- Portuguese
- English
- Hindi
- Sindhi

## INTERESTS



## EDUCATION

- MASTER'S IN COMPUTER SCIENCE & ENGINEERING- 2018 – 2020**  
Instituto Superior Técnico, University of Lisbon.  
Specialization in Cyber-Security and Information Systems.
- BACHELOR'S IN COMPUTER SCIENCE & ENGINEERING- 2015 – 2018**  
Instituto Superior Técnico, University of Lisbon.

## EXPERIENCE

- INESC-ID – February 2020 - January 2021**  
Intern - Development of my Master Thesis  
Development of an online visualization tool to detect fake news as my master thesis. The goal was to implement metrics with the help of Natural Language Processing (NLP) and Machine Learning algorithms, develop a web application to present these metrics to the users, and evaluate them under a consumer's perspective. **Python, Flask, JavaScript and HTML & CSS.**
- PWC – July 2019**  
IT Consultant in the field of Cyber-Security  
Completed a summer internship where I could understand Cyber-Security business needs and technology requirements while working alongside risk consulting developers.  
Gain a work experience perspective by working with real clients and improved my Soft Skills.

## SKILLS

Python	●	●	●	●	●
Java	●	●	●	●	●
SQL	●	●	●	●	●
HTML & CSS	●	●	●	●	○
C	●	●	●	●	○
JavaScript	●	●	●	○	○

## FREELANCING PROJECTS

- HOTEL INDUSTRY – January 2021 - Present**  
Restaurant Website  
Implementing a website for a restaurant to display photos, menu, and newsletters.
- TALENT POOL – November 2020 - January 2021**  
Web application for internal management  
Implemented a web application along with 2 college colleagues to manage candidates' personality profiles of the company, displaying them in a table and presenting statistics over the data. **Firebase, DataTables, GoogleCharts, JavaScript and HTML & CSS.**

## ACADEMIC PROJECTS

- Developed a static analysis tool that receives in Json, slice of code of a web application developed in Django and detect vulnerabilities like SQL Injection, XSS by checking if a correct sanitization of the incoming input is made by the application. **Python- 2020.**
- Created an "as-is" process model for CSV Pharmacy, identified issues following a case study provided by CSV Pharmacy, proposed a "to be" model with a new Business Process Redesign and simulated the business process presenting the benefits of the redesign. **BPMN, ArchiMate- 2020.**
- Solved a theoretical project where I could understand the internal mechanisms of a relational Database Management System (DBMS), including storage management, indexing, processing, and optimizing queries, transaction management, concurrency control and recovery management. **SQL- 2019.**

- Developed a Highly Dependable Notary application which certifies the transfer of ownership of arbitrary goods between users with the Portuguese Citizen Card to certify its identity and provide transactions with strong cryptographic guarantees like integrity, confidentiality, and non-repudiation. The system is resistant to Byzantine faults and some attacks like DoS and Man-in-the-Middle. **JAVA- 2019.**
- Developed a few small projects within the scope of forensics cyber-security which included file forensics, steganalysis, memory and file system analysis, analyze network traces, website fingerprinting over TOR and some other forensics technics. **Kali Linux- 2018.**
- Created an integrated view of the AdventureWorks database (created by Microsoft) and a database provided by faculty. Created a data warehouse from AdventureWorks database and wrote queries for analysis and reporting purposes. **SQL/OLAP, MDX Queries, MySQL, Pentaho Data Integration & Pentaho Report Designer – 2018.**
- Implemented an Information Search & Extraction System with the functionality of an ad hoc search, classification, and statistical analysis of a set of documents containing electoral manifestos of several political parties. **Python – 2018.**

## VOLUNTEER EXPERIENCE

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### • **NAPE (INSTITUTO SUPERIOR TÉCNICO) - September 2019 - July 2020**

Mentor

Took part in a Mentorship program provided by my University, which consists of helping new students to integrate and adapt to the new environment and helping them obtain academic success.

### • **INTERNATIONAL ASTRONOMICAL SEARCH COLLABORATION (IASC) - 2010-2013**

Asteroid hunter

Compared astronomical images provided by Nasa using **Astrométrica** software for the purpose of moving object discovery such as asteroids.

Became the first school of Portugal (Escola Secundária de Alvide) to discover an asteroid and named as ESAlvide.