Fran Cortés

in LinkedIn | 🌐 francordel.github.io | ✉ fran.j.cordel@gmail.com | 🐙 GitHub

**AI	Cybersecurity Researcher**	**Universidad de Murcia**	*Murcia, Spain*	**10/2024 – Current**

- AI Engineer Researcher focused on Federated Learning and Cybersecurity applied to IoT, leveraging Large Language Models and advanced AI techniques for vulnerability identification and penetration testing.
- Contributed to academic research and the development of secure, privacy-preserving machine learning systems in collaboration with interdisciplinary teams.

Specialist Software Engineer	**Vodafone**	*Malaga, Spain*	**09/2023 – 10/2024**

- Developed microservices using Java Spring Boot, MongoDB, Apache Kafka and Docker, while adhering to agile methodologies and industry best practices while deploying new features into production.
- Led the technical hiring process for new graduate engineers, including designing technical scenarios and interview questions.
- Mentored our internship engineers to create a final project, simplify the DB budget management process across portfolios using power app while building a chatbot as an extension.
- Proposed and designed using figma a frontend application to track our service orders and help to clarify our demos.

Deep Learning Engineer Lead	**Bemyvega**	*Murcia, Spain*	**12/2022 - 05/2023**

- Led the AI team in developing real-time transcription systems using NLP and deep learning techniques, including LLM models. Analyzed and selected appropriate models for each use case, resulting in high-quality transcriptions.

**AI Software Engineer	CEO	Founder**	**MiSintaxis**	*Murcia, Spain*	**09/2019 - 09/2023**

- Led the creation, design, development and strategy of the number one app in the world of syntax teaching, with more than 90,000 downloads all around the world
- Applied Natural Language Processing techniques for Spanish language processing. Conducted fine-tuning of the Bloom and GPT2 model on the Ancora corpus, resulting in impressive F1 metrics for Spanish constituency parsing. Using Hugging Face, PyTorch, Python and AWS to deploy it. Design and implement the architecture on AWS services.
- Designed and implemented scalable APIs and background workers to develop this mobile app.
- Used android studio with Java and XML at first and then led the migration to flutter in order to create a multiplatform app.
- Recruited 1 designer, 3 software engineers.
- Used the lean methodology to create a minimum viable product and implemented the agile methodology with SCRUM using Jira.
- Managed the business side, including legal issues, branding, recruiting, fundraising, external communications and networking.

Projects

- Movie Recommendation System: Created with my colleague a hybrid system using content-based, collaborative-based and Knowledge-based filtering using Java (Github Link) (2/2022)
- TURBINE: Before going to college, I created a 3D mobile video game for Android using Unity 3D with C# and Blender. The game was available in the play store for free. Link to YouTube Gameplay (07/2018)
- ANALIZANDO:Created a syntax teaching app in high school at the age of 15 in order to help students prepare for exams. Used Android Studio and developed it with Java and XML. The app was available in the Play Store, and it had more than 30,000 downloads (09/2016)

Education

Bachelor of Computer Engineering with Honors	**Universidad de Murcia**	*Murcia, Spain*	**09/2019 - 07/2023**

- Major in Computer Engineering. GPA of 8.6, this is in the top 1% of the university.

ERASMUS-Computer Engineering	**Politechnika Wrocławska**	*Wroclaw, Poland*	**09/2021 - 02/2022**

- Major in Computer Engineering. Studied abroad in Poland for one semester. All classes were in English.

Skills

- Natural Language Processing | Deep Learning | Federated Learning | Pentesting | Hugging Face | PyTorch | Python
- Java Spring Boot | Docker| JavaScript | HTML | CSS | C++ | C | MongoDB | MySQL | AWS | Git | SCRUM | Unit Testing | Cucumber | BDD

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- Management | Microservices | Artificial Intelligence | Cybersecurity | Full-Stack | Agile
- English, Spanish, French – *All professional proficiency or above*

Awards

- **Extraordinary Final Degree Project Award**: Receive recognition for my final project. Applied Natural Language Processing techniques for Spanish language processing. Conducted fine-tuning of different LLMs. Design and implement an architecture based on AWS services.
- **Extraordinary High School Award**: Received a recognition for passing every subject of my final year of high school with Honors
- **First place in** multiple startup competitions and regional contests with my startup, MiSintaxis.
- **Awarded scholarships** to take courses in business administration and management.

Others

- Volunteered as a mentor for international students in my city.
- Performed Tech Talks in different universities and in different high schools.