ALEJANDRO GÓMEZ NOÉ



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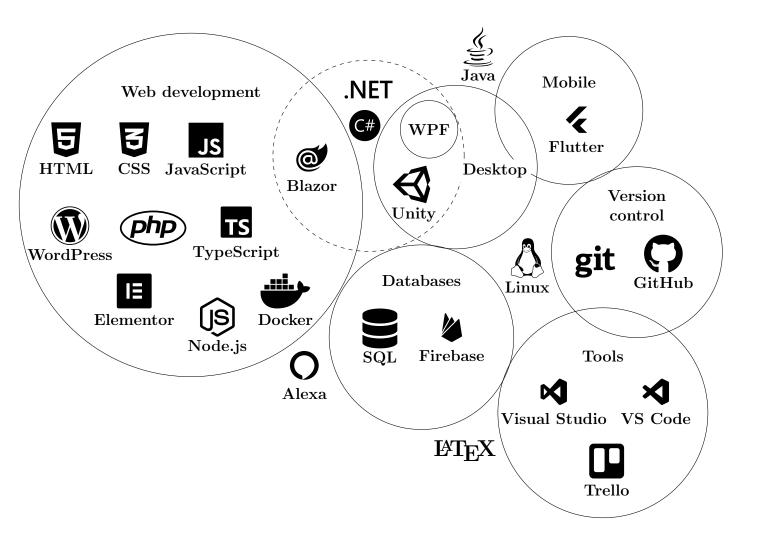
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Alejandro Gómez is a **Software engineer**, currently **working** at the **Universitat Jaume I (UJI)**.

Knowledge



Experience

May 2024 - February 2025 — Research Support Staff — Universitat Jaume I (UJI)

As research support staff in the $Knowledge\ Engineering$ group at the $Universitat\ Jaume\ I\ (UJI)$, my work consists of research and application development within the framework of the research project MINEGUIDE.

MINEGUIDE Project

The full name of the project is: "Integrated development and exploitation of process mining models and clinical guideline models in support of the Learning Health System (MINEGUIDE)", and it is a collaborative project between 3 Spanish universities:

- UJI Universitat Jaume I (Castellón) (coordinator)
- UPV Polytechnic University of Valencia (Valencia)
- UMU University of Murcia (Murcia)

whose objective is the development of a decision support system in the field of healthcare.

The project is based on **process mining** and **clinical guidelines**, and focuses on improving **care quality** and **efficiency** of healthcare processes by finding **relationships** between **real processes** (obtained from data) and **ideal processes** (defined in clinical guidelines).

My main work has been to conduct a **case analysis**, applying **process mining** techniques to a set of hospital data related to **COPD** (*Chronic Obstructive Pulmonary Disease*), with the aim of finding if there are **relationships** or **deviations** between the real and ideal processes, publishing the results in a scientific article.

March 2022 - April 2024 — Mid-level software engineer — ITACA-SABIEN (UPV)

As a mid-level software engineer at the **SABIEN** (Technological innovations for Health and Wellbeing) group from the Institute of Applied Information Technologies and Advanced Communications (ITACA), which is part of the Polytechnic University of Valencia (UPV), my work consists on developing applications and providing technical support in various ways in the context of several research projects.

Projects I have participated in

• **MOVE-IT** (2023 - 2024)

- Training program for improving physical exercise of people with intellectual disabilities through *exergames* and technology
- European ERASMUS+ project in collaboration with:
 - * IVASS Instituto Valenciano de Servicios Sociales (Spain)
 - * CERCIOEIRAS Cooperativa de Educação e Reabilitação de Cidadãos com Incapacidade (Portugal)
 - * UiT Tromsø University (Norway)
 - * ORAS Ospedale riabilitativo di Motta di Livenza Hospital (Italy)
- I collaborated with UiT in the development of the apps for the project (AGA and Sorterius), built with Unity
- I implemented a website with an API for data collection using Blazor, ASP.NET
 Core Identity and EFCore, which I then hosted in a UPV server
- I integrated the *Sorterius* app with said API for user management and data collection during the pilots for later study
- I managed the server and worked alongside the participant centers during the pilots to ensure the apps were working properly

• **PM4H** (2022 - present)

- Usage of *Process Mining* techniques for improving efficiency on the management of information in the health sector
- I developed several features for the "**PMApp**" desktop application, which runs **process mining** algorithms for treating and visualizing different kinds of data
- Said app is developed in C#, and uses \mathbf{WPF} for the user interface
- I have improved the visualization system for tables and histograms, I have added support for using proxies...

• **LIFECHAMPS** (2023)

- European project for improving the quality of life of cancer patients, consisting of a consortium of 15 partners from 10 countries, led by the Aristotle University of Thessaloniki
- I closely collaborated with the IIS La Fe and the company MySphera, configuring Raspberry Pi devices and performing a total of 50 installations in patients' homes in the province of Valencia between March and July 2023 for a multinational pilot project

• **DIAL** (2022 - 2023)

- Voice assistant for the detection and addressing of Unwanted Loneliness in the elderly,
 based on the open source Mycroft system
- My contribution included training a *machine learning* model so the phrase "*Hola dial*" can be used as a wake word for the assistant
- On top of that, I have configured over 20 Raspberry Pi devices so they function as voice assistants by means of the DIAL system

- Orriols Arran de Terra (2022)
 - Website intended for broadcasting news and local activities from the Els Orriols neighborhood in Valencia
 - I developed said website using WordPress and Elementor
 - In order to create some custom features, I built **plugins** with **PHP**
 - I also used HTML, CSS y JavaScript

Education

University

Computer Science degree Mention in Software Engineering Polytechnic University of Valencia (UPV), 2021

Projects for subjects

- Al Loro (Repositorio) (Memoria):
 - I implemented by myself an Amazon Alexa skill for my final degree project, using Node.js and TypeScript.
 - I integrated said skill with a database hosted in Firebase, on top of creating a mobile app using Flutter to manage user preferences
 - I designed an authentication system using several AWS services; such as Lambda,
 DynamoDB or API Gateway
- Frozen Out (Repositorio):
 - I was part of the development team for a video game made in **Unity** with C# as a project for the "IPV" subject (2019)
 - I designed a dialog system with support for using formats such as bold, italics, and different colors by working on top of the YarnSpinner library
 - This project was part of the **Project fair** (2019) organized by the ETSINF (computer science school at the UPV)
 - The project carried on without me after the final submission for the subject (January 2020). In February of 2021, Frozen Out won the PlayStation Commitment Special Award (article in Spanish)

Languages

• Spanish, native

- English, C1 level (First Certificate in English Grade A Cambridge English Level 2)
- Catalan (Valencia), C1 level

Activities

Mentor - Technovation Challenge

I participated as a volunteer mentor for the Technovation Challenge contest organized by Iridescent in its 2019 edition, in collaboration with American Space, an association from the *Polytechnic University of Valencia (UPV)*.

Others

• Driving license (class B)