

# GONZALO GARCIA MARTINEZ

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I finished a Master of Computer Science focused on Artificial Intelligence and HCI. I worked as Software engineer too. I have 6+ years of experience in C# .NET for web and desktop applications; and 3+ with Python. I consider myself a responsible, proactive, hard working, and organized person. Being worked for different projects and with different people helped me to adopt to the changes quickly and made me a mature team worker. Indeed, I am able to work well in a team as well as using my own initiative.

## WORK EXPERIENCE

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### BairesDev, USA

June 2021 - Present

*Senior Software Engineer*

- BairesDev is the leading Nearshore Technology Solutions company.
- Participating in .NET Core projects for IGT. Deploying and maintaining .NET and React web applications with AWS and SQL Server. Also, implementing new features in Windows Form/WPF/ReactJS projects that take care of building and managing millions of scratching lottery tickets. Speeding up the ticket creation process with 100 servers in the back-end and integration of web services and applications. Migration of Angular application and C# apps.

### Wakichi Soluciones, Worldwide

January 2021 - Present

*Semi Senior Software Engineer*

- Had an alliance with Innicia, which is a startup accelerator in charge of guiding startups in Peru.
- Designed the architecture, database and developed a web application in .NET Core C#, API, Identity and SQL Server with a Code First Approach. Also, implemented views using React JS along with axios, Material UI, Reactstrap, React Bootstrap, and Docker.
- This app is going to increase research in Peruvian universities by matching thesis students with academics or experts in the industry.
- Participated in other projects related to Health, E-commerce, Real State, among others with clients in England, Chile and Peru. Used Python, Django, MySql, PostgreSQL for the back-end; and Javascript, HTML, CSS for the front end.

### IDL, Australia

January 2019 - December 2020

*Research Software Engineer*

- Interaction Design Lab at The University of Melbourne in charge of managing and financing research projects. Participated in two research projects that were published in top conferences.
- Developed a VR application in C# using Unity and VS2019. It replicates flooding in Melbourne, Australia. The application contains interactive tasks that the user has to follow. These helped us to investigate and evaluate the UX and user behaviour against Climate Change.
- Developed a web application in C#, .NET with SQL Server with VS2017, along with tools such as Elastic Search and Kibana. The web application controlled and managed requirement documentation of a software product. With this information, it performs text analysis, and therefore detect possible conflicts between these requirements.

### Microdata, Peru

June 2018 - December 2018

*Semi Senior Software Engineer*

- Software company in charge of large systems in the Southern International Port Terminal in Peru and other companies.
- Developed a new web application in charge of all the commercial area of the terminal. Built with .NET MVC C# in VS 2017, Kendo UI, JavaScript, CSS, SQL Server, and as agile methodology, Scrum.
- Led the team for a brief period due to the absence of the leader, and thus improve my task estimation analysis, time management and communication skills with the team and customers.

#### **TDN – Team Dot NET, Peru and USA**

August 2016 - May 2018

*Semi Senior Software Engineer*

- Software company in charge of freelancer projects for the mainly American market.
- Developed tasks of Analysis, Design, Development, Systems Architectures, and Testing of Components in different platforms such as: .NET: C#, Asp.Net MVC, Web Forms, SQL Server and ORMs. Web Technologies like: HTML, JavaScript, jQuery, Angular, CSS, Web services, applying agile practices.
- Participated in projects that accelerate business processes and speed coding and testing.

#### **Ministry of Education, Peru**

April 2016 - July 2016

*Junior Developer*

- State-Owned Enterprise in charge of promoting the education at all levels in Peru.
- Developed desktop application in C# with Windows Form Applications and SQL Server using VS2017.
- This system helped that systematize their processes. This system helped with the delivery of payments to teachers efficiently. Also, the use of the paper was removed, as well as a room full of documents.

### **EDUCATION**

#### **The University of Melbourne, Australia**

2019 - 2020

Master of Computer Science.

#### **Universidad Catolica de Santa Maria, Peru**

2012 - 2016

Engineering degree, Software.

### **CONTRACT AND UNIVERSITY PROJECTS**

#### **Teaching Python and Unity - Pedro P. Diaz Institute**

March 2022 - April 2022

- Taught Python course about fundamentals, databases and web applications in Django (40h)
- Taught Unity course about fundamentals and game development (40h)

#### **AI Pacman**

August 2020 - November 2020

- Participated in a Pacman Competition that is running across several universities.
- Implemented 4 AI techniques using Python: A\* algorithm, Monte Carlo Tree Search, Approximate Q Learning, and Minimax.
- Understood how I can adapt and combine different strategies for different problems and situations, in this case the Pacman game.

#### **Misinformation Detection**

May 2020 - July 2020

- Implemented a NLP model in Python that can detect fake news about Climate Change. I used state-of-the-art pre-trained models such as BERT and variations (transformers) to obtain higher accuracy and precision.
- Obtained a F1-Score of 72.7% in the public test set and 71.6% in the private test set for a CodaLab competition (42/281).
- Could tackle problems with missing data since I had to crawl the web and performed several experiments to find the best solution.

### **Co-authorship Network Link Prediction**

March 2020 - May 2020

- Implemented a Machine Learning model that can predict future relationships between authors in a network using Python.
- The final model has an accuracy of 93.186% in the public test set, and it obtained 94.153% in the private test set in a Kaggle competition (28/166).
- Consolidated my knowledge about Machine Learning in a real competition and I improved my ability to work under pressure with time deadlines.

### **Domain Adaptation**

March 2020 - May 2020

- Implemented a Machine Learning technique (FEDA) from a paper in order to perform Transfer Learning into a a modified data-set from the Inner London Education Authority that contains examination records from 140 schools using Python.
- The final model with this data-set could predict better grades of the students and outperformed current baselines in the literature.

### **Restaurant Lens**

July 2019 - November 2019

- Android application developed in Java with Firebase. The main purpose of this application is to recognize restaurants by taking a photo or selecting an image from the gallery. The model was trained and set up using Python, TensorFlow Lite and MLKit. The app can connect to Firestore and Zomato API in order to retrieve restaurant information.
- This project helped me to improve my communication skills and conflicts management in a team. Also, organizing and completing coding tasks on time.

### **Sentiment Analysis in Twitter**

July 2019 - November 2019

- Developed a simple method using Python with two traditional techniques in text processing: TF-IDF and BOW. I implemented well-known pre-processing methods to remove sparsity in the text and I selected the most suitable model based on several algorithms.
- With this project, I could understand the fundamentals of Machine Learning obtaining an accuracy of 80%.

### **Autodema System, Autonomous Authority of Majes**

May 2015 - November 2015

- State-Owned Enterprise in charge of supplying and regulating the water resource for agricultural and urban use.
- Developed a web and desktop application in C# with Windows Form Applications and SQL Server which improve the control of the water resource. It generates reports in Crystal Reports, these were helpful for decision making by the Head Department.

### **SIMAX, Max-Lenz**

January 2014 - December 2014

- Private company in charge of Coca Cola air conditioning machines in the south of Peru.

- Developed a desktop application in C# with Windows Form Applications and SQL Server for the registration of all air condition machines. In this way the loss or theft of these machines was reduced considerably. The system generates reports with Crystal Reports as well.

## TECHNICAL SKILLS

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- **Front End:** React JS, Javascript, HTML, CSS
- **Back End:** C#, .NET, Python, SQL Server.

## EXTRA COURSES

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### AWS Cloud Practitioner Essentials

June

- Overall understanding of the Amazon Web Services (AWS) Cloud, independent of specific technical roles.

### Algorithm and Data Structures, HackerHours LATAM

March 2021 - May 2021

- Intensive course (more than 60 hours) that consolidated my Computer Science fundamentals in Python.

### Mobile Applications Course, Thomas Jefferson Institute

October 2017 - January 2018

- Intensive course (120 hours) that consolidated my knowledge about mobile applications. Implementation of android applications/features with Java in Android Studio, Firebase and GitLab.

## RESEARCH

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- **Garcia M. G.**, Ferris K., and Wadley G., 2020. Evaluating the User Experience of Mobile VR. Workshop 'Evaluating User Experiences in Mixed Reality'. Conference on Human Factors in Computing Systems (CHI '21), Yokohama, Japan.
- Ferris K., **Garcia M. G.**, Wadley G., and Williams, K. 2020. Melbourne 2100: Dystopian Virtual Reality to provoke civic engagement with climate change. In 32nd Australian Conference on Human-Computer Interaction (OzCHI '20), Sydney, Australia. DOI: <https://doi.org/10.1145/3441000.3441029>
- **Garcia M. G.**, Del Carpio A. F and L. N. Gómez. A Model for Detecting Conflicts and Dependencies in Non-Functional Requirements Using Scenarios and Use Cases using Text Analysis. 2019 XLV Latin American Computing Conference (CLEI), Panama, Panama, 2019. DOI: [10.1109/CLEI47609.2019.235051](https://doi.org/10.1109/CLEI47609.2019.235051).