Bernardo Lopes | Curriculum Vitae

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Profile

Backend engineer focused on building scalable and highly-performant applications. Proficient in several programming languages and database systems. Capable of decomposing problems and creating effective solutions. Also interested in game development, security, and embedded systems.

Work Experience

October 2017 - Present

Backend Developer, *Mountain Research Center (CIMO)*, Bragança, Portugal.
- Designed and implemented a standardized database for the food additives approved by the EFSA.
- Developed a RESTful API with authentication/authorization, pagination, and sorting/filtering.
- Created a dynamic website in Apache Wicket and an Android application to access and manage the data.

Education

September 2017 - Present

Master's Degree in Information Systems, *Polytechnic Institute of Bragança*, Bragança, Portugal.
- Developed ASP.NET Core and Android applications for energy bills management and tariff recommendations, using Web API services. Used Scrum and TFS to coordinate tasks between all projects members.
- Built a data warehouse with ETL processes and produced detailed reports using Visual Studio and SQL Server Management Studio.
- Explored new programming paradigms by completing projects in Prolog and Haskell.

September 2014 - July 2017

Bachelor's Degree in Informatics Engineering, *Polytechnic Institute of Bragança*, Bragança, Portugal.
- Designed and programmed a fantasy sidescroller for Windows and Linux with rich levels, various enemies and mechanics, and on-the-fly character switching. Developed as the final project using Unreal Engine 4, Blender, and Autodesk Maya.
- Developed a Java EE, JPA, EJB, and JSF web platform and RESTful API to manage weather records. Integrated the application with a Java GUI program to list records and graphically display the data.
- Created an online movie database without frameworks, using only pure PHP, HTML, CSS, Javascript, and MySQL.
- Built a nearly identical clone of a popular mobile game, using only C and OpenGL.
- Made a UWP application for personal finance management using C#, XAML, and SQLite.

Skills

Programming	Java, C#, C++, C
Databases	MySQL, SQL Server, SQLite, Apache Derby, PL/SQL
Tools	Lucene, Git/TFS, TestNG, Gradle
Other	Unreal Engine, OpenGL, Android, Linux

Events

July 2018

Monitor, *"Multidimensional Data Analysis" Summer Internship*, Bragança, Portugal.
Taught high school students basic programming concepts and helped them use R to analyse data collected through a small questionnaire.

November 2017	**Speaker**, *V Meeting of Young Researchers (EJI) of Polytechnic Institute of Bragança*, Bragança, Portugal.
	Discussed the importance of a design document in the development of video games, using a developed Unreal Engine 4 game as a practical example.

Publications

2018	Lopes, B., Padrão, T., Carocho, M., Lopes, R. P., & Ferreira, I. C. F. R. (2018). **Descodificar os "E": plataforma online de acesso aberto de aditivos alimentares**. *14º Encontro de Química dos Alimentos*.

Certifications

July 2017	CCNA Routing and Switching: Routing and Switching Essentials
May 2017	CCNA Routing and Switching: Introduction to Networks
September 2016	CCNA Routing and Switching: Scaling Networks
September 2016	CCNA Routing and Switching: Connecting Networks
December 2015	Introduction to iOS Development in Swift

Organizations

June 2016 - June 2017	**Vice-President**, *Núcleo de Estudantes de Engenharia Informática (NEEI)*, Bragança, Portugal.
February 2015 - February 2017	**2nd Secretary**, *ArtiColado Associação Cultural (AAC)*, Quintanilha, Portugal.

Languages

Portuguese	Native language
English	Fluent (Speaking, Reading, Writing)
Spanish	Fluent (Reading), Intermediate (Speaking, Writing)