diogo **castro**

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PROFILE

Proficient **C#** developer, **Scala** junkie.

Proactive with good teamwork skills**.**

Enthusiastic about **TDD** and **well-designed object-oriented** systems.

Functional programming aficionado.

Engaged participant on **StackOverflow**.

EDUCATION

Master's in Informatics and Computing Engineering
Faculty of Engineering of the University of Porto, Portugal
September 2007 – February 2013

Main Topics: Software Engineering, Project Management, Agile Development, Mobile Computing, Algorithms and Data Structures, Databases, Web Development, Artificial Intelligence, Distributed Systems.

CERTIFICATES

Functional Programming Principles in Scala
Martin Odersky, École Polytechnique Fédérale de Lausanne, June 2013

Microsoft Certified Professional - Programming in C#
Microsoft, March 2014

SKILLS

Object-oriented programming · Functional Programming · Scala · Design patterns · Agile · Concurrency · Dependency injection · TDD · git · C# · WinRT · NoSQL (Couchbase) · CI/CD

EXPERIENCE

Fraunhofer
Researcher, August 2012 – March 2013.
Developed the navigation module for an Android application, using both turn-by-turn and landmark-based approaches. Developed complex heuristics to evaluate landmarks data retrieved from OpenStreetMap, and used the device's sensors (e.g., gyroscope, accelerometer) to locate and navigate the user.

NaviNet
Software Engineer, May 2013 – July 2014
Senior Software Engineer, July 2014 - Present
Responsible for designing, unit testing, implementing and deploying several scalable web servers using ASP.NET Web API, ActiveMQ and Couchbase.

OPEN SOURCE

Contributed to AutoFixture
https://github.com/AutoFixture/AutoFixture
AutoFixture is an open source library for .NET designed to minimize the 'Arrange' phase of your unit tests in order to maximise maintainability. Its primary goal is to allow developers to focus on what is being tested rather than how to setup the test scenario, by making it easier to create object graphs containing test data.

Author of JSend WebApi & Client
https://github.com/dcastro/JSendWebApi
JSend.WebApi is an extension of ASP.NET Web API for designing APIs using the JSend protocol (https://labs.omniti.com/labs/jsend).
JSend.Client is a library for consuming JSend APIs.

Author of Sequences
https://github.com/dcastro/Sequences
Sequences is a port of Scala's *Stream[+A]* to C#. A *Sequence<T>* is an immutable lazy list whose elements are only evaluated when they are needed. It is composed by a head (the first element) and a lazily-evaluated tail (the remaining elements).

Author of DequeNET
https://github.com/dcastro/DequeNET
A concurrent lock-free deque (double-ended queue) implementation in C# - push/pop/peek operations in constant time O(1) - and a regular deque implemented as a ring buffer.

Author of MementoContainer
https://github.com/dcastro/MementoContainer
An alternative approach to the Memento design pattern. Through reflection, the container takes a snapshot of your objects' state, so that you can easily rollback when recovering from errors or implementing an "undo" mechanism.

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PROJECTS

MetroTasks
https://www.microsoft.com/en-us/store/apps/metrotasks/9wzdncrdfxdk
Metro Tasks is a productivity application for Windows 8 / Windows RT that helps you keep track of your to-do's. The app features synchronization with Google Tasks, type to search, tile and lock screen updates.