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Issued 17th January 2022. futurelearn.com/certificates/tohzzxz

Certificate of Achievement

Roberto Nicolás Savinelli

has completed the following course:

FUNCTIONAL PROGRAMMING IN HASKELL: SUPERCHARGE YOUR CODING
THE UNIVERSITY OF GLASGOW

This online course explored the concepts of functional programming using the Haskell language. The course covered standard functional programming techniques, as well as some advanced concepts, which were applied to realistic programming problems.

6 weeks, 4 hours per week

[illegible]

Wim Vanderbauwhede
Senior Lecturer in Computing Science
The University of Glasgow

[illegible]

Jeremy Singer
Lecturer in Computing Science
The University of Glasgow

University of Glasgow

VIA VERITAS VITA

TRANSCRIPT

University of Glasgow

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STUDY REQUIREMENT
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LEARNING OUTCOMES
- Develop simple programs involving basic Haskell techniques, including pure function definitions
- Produce definitions of algebraic data types and apply recursion to define functions that traverse such types
- Interpret data structures and function interfaces using types
- Apply formal methods to prove properties of functional programs
- Develop, modify, and explore code using standard Haskell platform tools
- Justify why a program uses common standard monads (including IO and Maybe)
- Explore standard combinators for operating on lists

SYLLABUS
- Evaluation via expression reduction
- Semantics of function abstraction and application
- Operations involving basic types including integers, characters and booleans
- Definition and traversal of recursive data types including lists and trees
- Techniques for structuring programs of non-trivial size
- Developing custom parsing tools with library support
- Automated testing with the QuickCheck tool
- Infinite data structures and lazy evaluation
- Type classes
- Principles of Lambda calculus
- Monads

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