Flynn Milton

PROFILE

I graduated in 2020 having done an integrated masters degree in Maths at Bath University. Because I achieved 2 A*s in my maths A levels, Bath University suggested I apply up front for a masters degree. I am very passionate about Mathematics and have continued my studies of nonstandard analysis. Since graduating I've done some programming work, which necessitated learning several different programming languages (Python, SwiftUI see below) and I believe that learning the concepts of nonstandard analysis have helped me to learn the structure of these languages and precise usage of notation and terms. I've also explored cryptology as an application of pure maths, learning about lattices, number theory and group theory.

EXPERIENCE

PROGRAMMING, EASTERDOWN LTD; TAUNTON, SOMERSET — 2021

Easterdown Ltd employed me to work remotely. I provided programming and consultancy for two projects.

The following were the two briefs provided to me:

Project Title: SwiftUI IOS Bluetooth-RFID device reader App
Project Description: Translate a working IOS app from a hybrid of Objective-C and Swift UIKit to SwiftUI, redesign the interface and implement it. The app uses bluetooth to read single RFID tags and groups of RFID tags from bespoke hardware and then transfer tag numbers to a database for queries or record creation. The app is used to monitor veterinary medicine usage and record veterinary treatments.

This project got us on to the Apple Entrepreneur Camp for female founders, where we increased the scope to transfer all the features from the external database into the app, including a redesign of the database with CoreData.

Consultancy included: Learn new programming languages and technologies (IOS and SwiftUI). Learn the Core technologies for Bluetooth on IOS, how to use a URL scheme to link to a Filemaker Go database as well as redesign/transfer FileMaker database to use CoreData. Provide handover guidance and education to Easterdown personnel regarding SwiftUI.

And:

Project Title: Penrose Tiling Railings visualisation in Python

Project Description: Develop a Python computer program to generate a pattern of arcs on a Penrose P3 aperiodic tiling that can be scaled for use to visualise and create railings and balustrades for the Lightwell in the new building at Easterdown.

Consultancy includes: Learn a new programming language (Python and libraries). Learn the mathematics that create a Penrose P3 tiling.

Create a parameterised program in Python with the flexibility to generate a scalable image of a Penrose P3 tiling. Program must also flexibly generate tiled (interconnected) Arcs through the P3 tiling.

Provide guidance and education to Easterdown personnel regarding P3 tilings.

CONSTRUCTION, CARPENTER OAK LTD; TOTNES, DEVON — SUMMERS 2016 - 2021

Carpenter Oak is a timber framing company in Devon. I've worked on carpentry projects and more recently I've been writing a prototype app for use by Carpenter Oak employees as a tool for sales. The app will introduce Carpenter Oak's work to new clients by allowing them to view photos and images.

Project Title: SwiftUI IOS Past projects prototype app

Project Description: To build an app that can be used for an internal tool to display past projects of Carpenter Oak, with an easy to use search functionality and a map of where the projects are located.

Consultancy includes: Decoding JSON format data into a Swift structure.

Working closely with Carpenter Oak employees to decide usage requirements and to design an interface that they will find stylish and easy to use.

Requirements are to filter project information for viewing by cost, date, style, client, Architect and location, in order to present images and videos.

TUTOR, UNIVERSITY OF BATH; BATH — 2018

Tutored an undergraduate Algebra class. This involved marking their work and planning lessons.

SHADOWING UNDERWRITERS, APOLLO 1969; LONDON — 2018

Analysis of underwriting claims, research of 'gig' economy companies and a case study of the collapse of Morandi Bridge, in Italy.

SHOP ASSISTANT, DARTMOUTH ICE CREAM COMPANY; DARTMOUTH, DEVON — SUMMERS 2017 - 2018

Customer service, opening and closing shops, cashing up, serving.

BALLANTINE ARNOLD LTD; KINGSBRIDGE, DEVON — 2016

Ballantine Arnold are Structural Engineers. I provided on site help and engineering calculations for the loads on SIPs panels.

EDUCATION

University of Bath, 2020 — Degree of Master in Mathematics - 1st class honours.

Modules -:   Analysis (ODEs & PDEs, Hilbert spaces, Functional Analysis, Differential & Geometric analysis)
Algebra (Group Theory, Algebraic Topology, Algebraic Curves, Number Theory, Galois Theory)
Geometry - (Curves & Surfaces, Projected Geometry)
Numerical Analysis - (Elliptic PDEs)
Computer science - (Logic and semantics, Functional programming, Foundations of computation)
Probability and Statistics

King Edward VII Community College, Totnes, Devon :

 2016 - A Levels - Maths A*, Further Maths A*, Physics B.

SKILLS

Programming in: SwiftUI, Python, Haskell, MatLab, Excel, R., LaTeX Word processing Mathematics skills. I enjoy reading, climbing and sea swimming.

REFERENCES:

Professor Johannes Nordstrom -   j.nordstrom@bath.ac.uk

Vickie Ward - Easterdown Ltd - vickie.ward@easterdown.co.uk

Dr Michael Ward PhD Maths - Cryptography