Declan Kehoe

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Profile

I have experience developing software at all levels of the stack, using multiple languages and development environments, and always delivering value to employers. I have been commended by colleagues for finding efficient and effective approaches to the problems we have worked on, and been trusted as a reliable and personable member of any team by all levels of seniority.

From my background in the arts, I developed skills as a strong communicator, collaborator, and creative thinker. By going to uni as a mature student I learned software engineering on a computer science/ human computer interaction degree. I gained both robust engineering skills, and a holistic understanding of the way technology is experienced by users.

Education

BSC Computer Science (HCI) 1st Class Honours
University of Manchester, 2021

Awarded

Professor's prize for outstanding academic achievement in third year

Experience

Research Assistant & Developer - University of Manchester, 2021-2024

I have been trusted to work on multiple projects, the diversity of which has meant that I can quickly adapt to new teams and processes. My most practised skill has therefore become quickly establishing ways to automate setups, deploy code, and work seamlessly within whatever environment a project requires, confidently adopting new tools and technologies.

In my most recent project I designed a pipeline which built specific commits of a version controlled software stack, automated runs of that software for fuzz-based testing, collected and combined logs of those runs with metadata, sent the combined data to a remote but internally-managed secure server for later retrieval or further analysis. I then replicated the pipeline for use on other team member's machines; initially with bash scripts and config files for defining the languages and versions, and then with regularly updated VM images. We are currently developing an experience and benchmark academic paper for publishing based on this work.

On a previous project, part of the UK government's Lifelong Learning Entitlement trial, I co-created a flexible delivery mechanism (and redeveloped the teaching materials for) a short course on software engineering & UX topics from an agile perspective. I was also project lead for the team developing the web app to navigate the resulting course. My role was multifaceted, with tasks including the automation of building the course materials written in LaTeX and Markdown on custom Docker containers hosted on GitLab, co-developing the mostly vanilla HTML/JS/ CSS web app itself, deploying and managing the app on Heroku, coordinating with the University for user management via their SSO systems, and keeping track of issues on Trello.

Utilised Skills

Languages

Python

Bash / Shell

R

HTML/CSS/JS

JSON

Markdown

Tools & Tasks

GitHub - *version control & actions*

CI/CD - *overall design & setup*

Trello - *story creation & board maintenance following Agile practises*

VMWare - *Ubuntu based image creation & maintenance*

Heroku - *Web app deployment & management*

Developer and Agile Business Analyst - Imago Software, 2021

My first job after graduating was on a small team developing the complete tech stack for an online toolkit to help charities forced online by the pandemic. Our stack was PostgreSQL→Django→React, and we worked collaboratively on every part. I was also part of prototyping UI design in Figma, UX patterns with paper prototyping, end-to-end and component testing with Cypress, and deployment of the project on Netlify. This was a highly collaborative project, some main achievements were designing the models for the API generated using Django, initially developing the modules that were then populated with that data in React, and being the goto on the team for git merges.

My other main duty was as the team's business analyst, which meant I was the liaison between the clients and the other developers. This role required regular stakeholder feedback sessions to assess the effectiveness or our work, and helping co-discover the most valuable work for us to prioritise.

Languages
HTML/CSS/JS - *React TS & JSX*
Python - *Django REST framework*
Tasks & Tools
PostgreSQL - *schema design*
Netlify - *deployment*
Cypress - *test design & debug*
GitLab - *version control & CI/CD*

Developer on Generative Music Application - Dissertation Project, 2021

My final year dissertation project was a solo-developed generative music app. It was a self contained, GUI-driven, and built from scratch using Java in Processing3. A particular challenge was using threads to handle overlapping audio signals, while still allowing the user to manipulate the sounds in realtime, and keeping everything synced to variable tempos. I also produced a 15,000 word report covering both the technical aspects and UX design, for which I conducted semi-structured interviews with participants to develop metrics for success and areas of improvement. I also created a video presentation to summarise the theory behind the app, and process of its development. I was proud to receive the 'Professor's Prize for Outstanding Academic Achievement in Third Year' for this project.

Languages
Java - *in Processing3*
Tasks & Tools
Figma - *UX & UI prototyping*
IntelliJ - *for core Java ideation & experimentation*

Where possible, examples of the above work is available on my site: declankehoe.co.uk/work