👤 ABOUT ME

Hi, I'm Ash! An educator, researcher, and full stack developer with interests in Web technologies and Software Engineering (SE) education. My teaching and research focuses on filling the skills gap between academia and the software industry through authentic assessments which mimic industry relevant projects.

💼 EXPERIENCES

Software Engineering Lecturer   2019 - Present
Manchester Metropolitan University, Manchester, UK

I am the unit leader for first year Web Development, second year Full Stack Development and third year Mobile Computing. I am also the departments employability and placements lead and the programme leader for our BSc Software Engineering course.

Units taught:

- **Web Development**: A gental introduction to HTML, CSS and JavaScript. Students create a website for their favourite band/musician and interact with a RESTful API to provide the ability to sign up to a mailing list.
- **Full Stack Web Development**: Students are provided with an OpenAPI specification and a series of automated tests (written with Mocha and Chai). In the first half of the assessment they implement the API using Node, Express, and SQLite. Then for the second half of the assessment they create the front end using VueJS (see more: https://github.com/ash-williams/fsd_blog_engine_server (https://github.com/ash-williams/fsd_blog_engine_server))
- **Mobile Computing**: Students are provided with a backend server which implements an OpenAPI specification. They then create a React Native application which interacts with the API. Each year, the assignment API mimics an existing social media application (e.g., WhatsApp (https://github.com/ash-williams/whatsthat (https://github.com/ash-williams/whatsthat))). Students are also introduced to scalable architectures and security considerations.

Responsibilities:

Ash Williams

Software Engineering Lecturer

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○ ash-williams (http://github.com/ash-williams)

🐦 @williamsash (https://twitter.com/@williamsash)

G 6Vz4Yo8AAAAJ (https://scholar.google.com/citations?user=6Vz4Yo8AAAAJ)

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📄 Resume PDF (ash-williams.github.io/cv/ash-williams-cv.pdf)

- **Programme Leader**: I am responsible for the overall undergraduate Software Engineering course. This includes the overall coherance and delivery of the course, as well as catering to the needs of all students enrolled.
- **Employability and Placements Lead**: I interface with companies to help them build relationships with students and develop talent pipelines. I created and chair the departments Industry Advisory Board which is made up of senior leaders from organisations which regularly recruit our students. The board meets twice a year to discuss the curriculum and opportunities for engagement.

Other:

- Set up a group where students work on projects for social good. Typically applications and websites for charities and non-profit organisations.
- Personal tutoring, mentorship, and project supervision for undergraduate and postgraduate students.
- Consulted on, and co-developed projects to design extra-curricular courses aimed at plugging the digital skills gap.

Tutor/Teaching Assistant (part time)   2016 - 2018

University of Canterbury, Christchurch, NZ

I aided in the development and delivery of software engineering and data science units across multiple undergraduate and postgraduate units. In addition, I volunteered during University open days to promote the department to new students.

Units taught:

- Tutoring on the Masters level introduction to data science (Python)
- Tutoring on the 3rd year web computing architectures course (JavaScript, Node, Express, MySQL, VueJS)
- Tutoring on the 2nd year team project module (Java)
- Tutoring on the 1st year programming module (Python)
- Tutoring on the 1st year foundations of engineering module

Other:

- Mark exam papers for the Accounting and Information Systems department
- University open days and events

Technical Support Analyst   2013 - 2016

Drive Software Solutions, Stevenage, UK

Responsibilities:

SKILLS & PROFICIENCY

RESTful APIs and OpenAPI

JavaScript

Node & Express

React Native

VueJS

MicroServices

MongoDB

SQL

Empircal methods

Literature Reviews and Systematic studies

Text Mining and NLP

AI and ML

Data Science

INTERESTS

Climbing

Skiing

My two dogs :)
(https://www.instagram.com/ispylo/)

- Product based technical services and release management (including customer patching and maintianing test systems).
- Network design and maintainence
- Development of data analytics module and reporting for the main product (PL/SQL, Oracle, AngularJS)

🎓 EDUCATION

MA in Higher Education

2020 - Present

Manchester Metropolitan University, UK

Postgraduate studies in learning, teaching and assessment for Higher Education. Currently writing my thesis on the future of Software Engineering education.

PhD in Computer Science

2016 - 2020

University of Canterbury, NZ

My thesis was on assessing the quality of practitioner generated grey literature (e.g., blogs and tutorials) for use as evidence within software engineering research.

- **Keywords**: grey literature; evidence based software engineering; natural language processing; text mining; credibility assessment
- **URL**: https://ir.canterbury.ac.nz/handle/10092/17908 (https://ir.canterbury.ac.nz/handle/10092/17908)

MEng in Computer Science (Sandwich; Accelerated; First)

2011 - 2015

University of Hertfordshire, UK

An accelerated undergraduate masters course. The course is four and a half years long with the third year being an industrial placement year while studying part time. Third and fourth year included a mix of masters and undergraduate modules.

Other

- Cisco Certified Networking Associate (CCNA): Routing and Switching - Completed in Jun 2012 (not certified)

🗄 RESEARCH & PROJECTS

An overview to some of the key research projects that I have contributed to. For a list of publications, please refer to Google Scholar.

Software Engineering Research Exploiting Naturally Produced Artefacts (SERENPA) (https://serenpa.github.io/) - A project looking at the use of Grey Literature as evidence in research. We aim to survey Grey Literature and social media to complement existing forms of data collection techniques (e.g., surveys and interviews)

Whats the point of SE in Higher Education? - There are now multiple routes into SE, and the early careers curriculum now means that every 11 year old can code in two different languages. Higher Education (HE) providers will need to evolve in order to remain relevant. This project aims to investigate what the future of SE in HE looks like.

Secure Software Development in Action - This project aims to reduce the amount of insecure software by exploring practitioner attitudes, motivations and deterrants for focusing on security when developing.

Smarter Thinking (https://apps.apple.com/gb/app/smarter-thinking/id1583013567) - A native application built in collaboration with psychology researchers. A diary app that serves as a take home exercise for those undergoing therapy. The app promotes rational thinking using Rational Emotive Behaviour Therapy (REBT). The app is built using React Native and Firebase, and is publically available on Android and iOS.

Other -
- **REDDY Project**: A native application built to help those with eating disorders
- **NLP in Healthcare**: A collaboration between academic institutes and Salford Royal Hospital Neurologists. The aim is to look into NLP applications which support patient care and data analysis