CHARLIE HEWITT

Curriculum Vitae

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PROFILE

I'm a 23 year old computer scientist based in the UK. I recently graduated with a master's degree in computer science from the University of Cambridge and am hoping to pursue a career in research. I'm particularly interested in graphics, computer vision, human-computer interaction and machine learning. A portfolio of my recent work is available at chewitt.me.

SKILLS

- Programming in Python, C#, C/C++, Java, MATLAB, Objective-C, Swift and SML/OCaml.
- Application of machine learning using tools such as SciKit, Keras, (Py)Torch, OpenCV and TensorFlow, primarily in the context of computer vision.
- Source code management using Git.
- Deploying software to a number of platforms including Windows, iOS and Android devices.
- Using HTML/CSS, PHP and JavaScript in the production of websites, including use of frameworks such as React, Angular, Bootstrap and Foundation.
- OpenGL shader programming in GLSL.
- Database management using SQL.
- Knowledge of holography and experience working in optical labs.
- Graphical design experience including UI, UX and icon design using Adobe Photoshop.
- Proficient user of Mac OS, Linux and Windows operating systems.
- Extensive experience with Microsoft Excel, as well as word processing including use of LaTeX.

EXPERIENCE

RESEARCH ASSISTANT - COMPUTATIONAL MEDIA INNOVATION CENTRE - 2019

Three month RA position at the CMIC, Victoria University of Wellington in New Zealand, working with researchers and industry partners. Independent project work on computer vision and deep learning for omnidirectional stereoscopic video and its application to immersive mixed reality experiences.

RESEARCH INTERN - MICROSOFT RESEARCH - 2018

Six month internship at Microsoft Research in Cambridge to develop near-eye holographic display technologies for mixed reality. Development of hologram design algorithms and prototyping of holographic display systems, independent work within a small team.

INTERN - CYDAR - SUMMER 2017

Two month internship working at Cydar in Cambridge, helping to develop imaging technologies for surgeons to use in the OR. Software development work focussing on web-based technologies and user interaction.

INTERN - JAGEX GAME STUDIOS - SUMMER 2016

Three month internship within the web team at Jagex, focussed on projects involving the exploration of potential future business opportunities. Working as part of a small team to develop prototype web-based software.

EDUCATION

TRINITY HALL, UNIVERSITY OF CAMBRIDGE - 2014-2018

MEng (distinction - 87%) in computer science

Research focussed masters involving lectures as well as independent research projects and a thesis. Courses: Affective Computing, Computer Vision, Probabilistic Machine Learning, Advanced topics in mobile and sensor systems and data modelling and Interaction with machine learning. My thesis was looking at facial alignment, involving application of machine learning to computer vision.

BA (first class) in computer science

Diverse three year course covering topics ranging from physics and computer hardware design to machine learning and human computer interaction.

JOHN HAMPDEN GRAMMAR SCHOOL - 2007-14

A Level

- A* in Mathematics, Further Mathematics and Chemistry
- A in Physics

AS Level

- A in Mathematics, Further Mathematics, Chemistry, Physics and Geography

Cambridge iGCSE

- A* in Mathematics

GCSE

- A* in Mathematics, Physics, Chemistry, Biology, Music, Industrial Technology, Geography, English Literature, French, Religious Studies (half course) and ICT (half course)
- B in English Language

RESEARCH

ASSESSING PUBLIC PERCEPTION OF SELF-DRIVING CARS: THE AUTONOMOUS VEHICLE ACCEPTANCE MODEL

Charlie Hewitt, Ioannis Politis, Theo Amanatidis, Advait Sarkar - Intelligent User Interfaces 2019

HEAD POSE ESTIMATION AND FACIAL LANDMARK LOCALISATION FOR ANIMALS

Masters Dissertation - Supervised by Marwa Mahmoud - 2018

SHAPE-ONLY FEATURES FOR PLANT LEAF IDENTIFICATION

Masters Project - Advised by Marwa Mahmoud - 2018

CNN-BASED FACIAL AFFECT ANALYSIS ON MOBILE DEVICES

Masters Project - Advised by Hatice Gunes - 2018

CONFIDENCE MEASURES FOR CNN CLASSIFICATION USING GAUSSIAN PROCESSES

Masters Project - Advised by Damon Wischik - 2018

PROCEDURAL GENERATION OF TREE MODELS FOR USE IN COMPUTER GRAPHICS

Undergraduate Dissertation - Supervised by Gyorgy Denes - 2017

REFERENCES

Dr Andreas Georgiou
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Director of Studies, Computer Science
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