CHARLIE HEWITT
Curriculum Vitae

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PROFILE

I'm a 22 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 & development. 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, Objective-C, Swift and SML/OCaml.
- Application of machine learning using tools such as SciKit, Keras, Torch and TensorFlow.
- 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.
- Source code management using Git.
- OpenGL shader programming in GLSL.
- Database management using SQL.
- 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 INTERN – MICROSOFT RESEARCH – SUMMER 2018
Three month internship working as part of a small team at Microsoft Research in Cambridge to develop near-eye holographic display technologies.

INTERN – CYDAR – SUMMER 2017
Two month internship working as part of the team at Cydar in Cambridge, helping to develop imaging technologies for surgeons to use in the OR.

INTERN – JAGEX GAME STUDIOS – SUMMER 2016
Three month internship as part of a small team, focussed on projects involving the prototyping and development of potential future business opportunities for Jagex.

WEBMASTER – TRINITY HALL BOAT CLUB – 2014-2017
Maintaining and updating the club website (trinityhallbc.co.uk), including complete website redesign, mobile compatibility update and implementation of online captaincy election system.

TREASURER – TRINITY HALL JUNE EVENT – 2016
Management of £150,000 budget and assistance in production of event hosting 2000 guests celebrating the end of the academic year.

RESEARCH

CONFIDENCE MEASURES FOR CNN CLASSIFICATION USING GAUSSIAN PROCESSES
Paper presenting a hybrid classification technique using Gaussian processes fitted on features extracted by a convolutional neural network to enable estimation of prediction confidence. The classifer is evaluated on the MNIST dataset and shown to have somewhat meaningful implications for confidence estimation.

PROCEDURAL GENERATION OF TREE MODELS FOR USE IN COMPUTER GRAPHICS – 2017

Project and associated dissertation produced for part II of the Cambridge BA course evaluating the effectiveness of Lindenmeyer–Systems and a fully parametric approach in producing realistic 3D models of trees for CGI. Implemented two systems in python for use with Blender, as well as an investigation of automatic design using genetic algorithms.

EDUCATION

TRINITY HALL, UNIVERSITY OF CAMBRIDGE – 2014–2018

MEng (distinction) in computer science
BA (first class) in computer science

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

ACHIEVEMENTS / INTERESTS

  - Participant at Hack Cambridge Recurse 2017, producing an IoT mail sensor, and at Hack Cambridge Ternary 2018, producing a VR photo gallery with automatic captioning.
  - Second place at Jane Street's eth0 hackathon 2015 and again at eth1 2016.
  - Lower Boats Captain and coach for Trinity Hall Boat Club.
  - Rowed and sculled as part of the first men's squad at Trinity Hall Boat Club.
  - Design, development and production of 'Flippers Ain't Wings' iOS App.
  - Created numerous mobile substrate tweaks with an installation base of over 100,000 iOS devices.
  - Winner of 'Most Promising Developer of 2015' and runner up 'Best Novelty Tweak of 2015' at the Jailbreak Awards 2015.
  - JHGS Orchestra (2010–11), Jazz Band (2011–14) and Senior Jazz Band (2012–14).

REFERENCES

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