Joe Withers

SOFTWARE DEVELOPER

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About Me

Software developer with a passion for computer graphics, currently in the Visual Effects industry and developing software tools to improve multiple aspects of the production pipeline. Proficient with a variety of Visual Effects software tools and their respective APIs, keen to apply production experience in a new development environment, with goals to expand knowledge of real-time graphics development. Previously experimented with GPU acceleration to improve interactivity within artist tools as part of academic study. Confident working under tight deadlines, and giving on-site support to production teams. Has a keen attention to detail, able to learn new codebases and APIs quickly, and adapt to their style and architecture. Adept problem solver with a good sense of humour, and enthusiasm to learn from peers. Interests in music, retro video games, and collecting plastic watches.

Experience

Moving Picture Company (MPC Film)   *London, UK*

SOFTWARE DEVELOPER   *July 2018 - July 2020*

- Working primarily on MPC's proprietary fur and feather grooming system, Furtility, initially as part of a small show support team and later as a dedicated cross-site product team.
- Collaborated on a redesign of Furtility's feather system, improving artist workflow and significantly reducing computation time for assets on shows such as Maleficent 2, amongst others.
- Implemented a regression testing suite for Furtility, allowing for code changes to be validated against production assets.
- Implemented a redesign of Furtility's internal caching algorithm, tailoring it to improve interactivity during grooming sessions.
- Working primarily with C++, Python, and Lua codebases.
- Experience working with Agile development methodologies.
- Screen credited on Maleficent: Mistress of Evil (2019), and Cats (2019).
- References available upon request.

Moving Picture Company (MPC Film)   *London, UK*

SOFTWARE DEVELOPER INTERN   *July 2017 - September 2017*

- Worked for 2 months at their London studio as part of their 'First Step' internship programme.
- Assisted in the development of a dedicated grass spawning tool, investigating use of OpenVDB for sparse texturing.

Technical Skills

PROGRAMMING LANGUAGES

- Proficient with C/C++, Python.
- Familiar with Lua, Bash.

SOFTWARE APIS

- Familiar with Boost, OpenGL, and Qt APIs.
- Experience using various Visual Effects APIs, including Maya, Katana, Alembic, and RenderMan.

SOFTWARE

- Proficient using Git version control system.
- Familiar with development on using Linux systems.
- Familiar with various Visual Effects DCCs and renderers, including Maya, Katana, Houdini, and RenderMan.
- Experience configuring Jenkins CI/CD pipelines.
- Experience profiling and debugging using VTune and RenderDoc.
- Familiar with Doxygen for creating documentation.
- Familiar with LaTeX for creating academic reports.

Education

Bournemouth University, UK

B.A. COMPUTER VISUALISATION & ANIMATION, FIRST-CLASS HONOURS   *September 2015 - July 2018*

- Studied the fundamentals of Computer Graphics techniques, Mathematics, and Computer Science.
- Relevant Modules: Principles of Rendering, Simulation Techniques.
- References from lecturers available upon request.

Midsomer Norton Sixth Form College

A-LEVEL QUALIFICATIONS   *September 2013 - September 2015*

- Maths - A*, Extended Project (Web Design) - A*, Art - B, Photography - B, I.T. (AS) - C.

Norton Hill Secondary School

GCSE QUALIFICATIONS

- Maths - A*, Science - A*/A, English - B/B, Art - A, Music - A*, Graphics - C, German - A, I.T. - Pass, Philosophy - A.