

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.