Albert Armea

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Work

Microsoft – Software Engineer   *Redmond, WA; July 2014 – Present*
- Improved the accessibility of Word, Outlook, and Windows 10 Mail by implementing adjustable text scaling, populating the tree used by screen readers, and fixing issues in high contrast modes.
- Made images more usable by automatically shrinking large images in received emails and providing scaling options for inserted images when composing an email.
- Improved email rendering fidelity on high DPI displays by correcting how Word uses CSS pixels.
- Wrote integration tests for email authoring scenarios using Microsoft UI Automation.

Google – Software Engineering Intern   *Mountain View, CA; June 2013 – August 2013*
- Extended APIs to an internal version control system, providing a unified way to view and manage changelists. These APIs are used to test and search Google's codebase.

Education

Rensselaer Polytechnic Institute   *Troy, NY; August 2011 – May 2014*
- Bachelor of Science in Computer Science *cum laude*
- Computer Science GPA: 3.72 / 4.0 · Cumulative GPA: 3.56 / 4.0

Projects

Noise (Java, Android)   *January 2017 – Present*
- Developing a completely peer-to-peer and infrastructure-free messaging protocol and app to enable communication when an Internet connection is unavailable, such as after a natural disaster.
- The protocol uses epidemic routing to ensure eventual message delivery, proof-of-work to mitigate spam, and end-to-end encryption to prevent eavesdropping.

Painting Sound (C++, Eigen; C#, Unity, Universal Windows Platform)   *July 2016*
- Drove development of a Microsoft HoloLens app allowing the hearing-impaired to visualize sound.
- Designed and prototyped a custom tetrahedral microphone that mounts to the HoloLens.
- Wrote signal processing algorithms to locate sounds in 3D space using this microphone.
- The app uses these sound locations to place visualizations in mixed reality.

Mumei (Python, OpenGL)   *August 2012 – December 2012*
- Designed and implemented a game to teach players programming skills.
- Wrote the graphics backend and text editor using PyGame and OpenGL.
- Helped integrate a custom virtual machine and C compiler written in Python.

WindowGroomer (C++, Qt, Windows API, Xlib)   *December 2012*
- Developed a user-friendly window manager for Microsoft Windows and X11.

Skills

Computer Languages and Frameworks: C/C++, Java, Python, JavaScript, HTML, Unity, OpenGL
Applications/OS: Windows, Mac, Linux, Git, Vim, Visual Studio, Android Studio, Autodesk Fusion 360

Awards

Microsoft, OneWeek Hackathon HoloHack First Place Winner   *July 2016*
Rensselaer Polytechnic Institute, Dean's List   *Fall 2011 – Spring 2014*