

Entry Level Software Engineer with 2+ years of experience developing large-scale software projects

EMPLOYMENT

Student Software Developer **Johns Hopkins University Baltimore, MD** **January 2016 - January 2017**

- Implemented an eye tracking algorithm within an Oculus Rift HMD using C++ and the OpenCV library
- Improved the accuracy of the algorithm by implementing iris tracking (via Hough Circle Transform) instead of dark pupil tracking by over 50%
- Redesigned the internal hardware of the Oculus to contain a FPV Infrared Camera to track the user's eye movement in real time
- Worked with a team of engineers to integrate a mobile robot, connected to an RC car, to mimic the user's eye movement while the actual car moves in the direction the user turns his head using Arduino and the Unity game engine
- Applied a pre-designed visual saliency model to the eye tracking display

Software Engineer, Intern **Icentric Corporation Los Angeles, CA** **Summer 2015**

- Helped lead the full development of a large scale web application (<http://www.myautodeal.com>) from start to finish in the timeframe of 2.5 months, following the agile methodology
- Created a relational database using MySQL and developed a PHP algorithm to extract data from Edmunds.com JSON REST API
- Optimized the backend database design schema to enable faster and simpler queries using data normalization (reduced runtime by 75%)
- Improved the original user interface design of large scale web applications such as <http://www.myautodeal.com> and [http://whatpatientsay.com](http://whatpatientssay.com)

Software Engineer, Intern **Icentric Corporation Los Angeles, CA** **Summer 2014**

- Optimized the algorithm for data extraction from a public JSON API into a local database using PHP and MySQL (reduced runtime from $O(n^2)$ to $O(n)$)
- Worked with a cross-functional team to redesign front end web application design to improve backend compatibility using HTML, CSS Bootstrap and Javascript

EDUCATION

Baltimore, MD **Johns Hopkins University** **Fall 2012 - Fall 2016**

- B.S. in Computer Engineering, Fall 2016
- Undergraduate Coursework: Programming Languages, Databases, Computer Vision, Image Processing, Medical Augmented Reality, Machine Learning, Computational Genomics, Distributed Systems

TECHNICAL EXPERIENCE

- **Projects** (complete list at: <http://www.chrissimmons.com/project.html>)
 - **Fault Tolerant Distributed Mail Service (2016)** -- Distributed Mail Software System used by multiple users to send emails to each other over a network of computers. Written in: C, Developed on Linux
 - **Logo Recognition Software (2016)** -- System that recognizes corporate logos and displays advertisement messages next to them. Written in: C++, Xcode

LANGUAGES & TECHNOLOGIES

- C++ (Proficient), Javascript (Proficient), Python (Proficient), C (Prior Experience), Java (Proficient), MySQL (Prior Experience), HTML/CSS (Proficient), PHP (Prior Experience), C# (Prior Experience)
- Xcode, PyCharm, UNIX Command Line, Git, Node.js, MongoDB, Android (Prior Experience)
- Mac OS, Linux (Ubuntu)