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Ann Arbor, MI 48103

PATRICK ESCHBACH

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EDUCATION

Ann Arbor, MI	University of Michigan	Fall 2014 – December 2017
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- Expecting Bachelor of Science in Computer Science
 - **GPA: 3.83**

EXPERIENCE

Software Engineering Intern	MathWorks	Summer 2017
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- Added support for MATLAB's new String data type to a variety of widely used MATLAB functions, including text manipulation and system level functions
- Improved an internal text type dispatch tool by utilizing C++ templates and template metaprogramming, resulting in a 50% decrease in the String library's total size
- Gained experience writing C++ and MATLAB code, unit tests, and help documentation

Head Teaching Assistant	University of Michigan	Fall 2016 - Present
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- Working closely with professor to prepare course projects by implementing a working solution and revising spec outlines to ensure clear instructions and grading
- Holding weekly office hours to help students with fundamental C++ and Java programming concepts such as polymorphism and multithreading

Software Engineering Intern	TD Ameritrade	Summer 2016
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- Constructed iOS prototype to explore viability of stock trading broker (thinkorswim) on Apple TV. Application was demoed at TD Ameritrade mobile development summit
- Developed multiple interactive screens featuring live news streams and real time ticking stock watchlists fetched from the main thinkorswim platform
- Learned Objective-C, Swift, Bitbucket and JIRA on the job and utilized them to build the app

Course Tutor	University of Michigan	Fall 2015 – Winter 2016
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- Held weekly office hours for introductory C++ programming concepts

PROJECTS

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- **Connect-4 Desktop Application** (2015). Java, IntelliJ IDEA
 - Interactive GUI allows 2 users to play multiple complete games of Connect-4 locally and across separate networks

Languages and Skills

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- C++, Python, MATLAB, Java, JavaScript, HTML, Objective-C, Swift, C
 - Git, Perforce, Linux, Visual Studio, Agile Development