

## **Bryan Dickens**

### **Computer Engineer**

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### **EDUCATION**

2011-2015 Pennsylvania State University, State College, Pennsylvania  
**Bachelor of Science in Computer Engineering**  
Schreyer Honors College, GPA: 3.82

2007-2011 Howard High School, Ellicott City, Maryland  
Ranking: 3<sup>rd</sup> of a 375 graduation class

### **RESEARCH EXPERIENCE**

Fall 2013 – Spring 2015 **Honors Thesis – Individualized Customization for Next Generation Virtual Learning Environments**

- Thesis Advisor: Dr. Conrad Tucker, Honors Advisor: Dr. Lee Coraor
- Investigated the personalized customization of virtual learning environments through data-driven feedback optimization

Fall 2014 – Spring 2015 **Research Assistant**, Design Analysis Technology Advancement Lab under Dr. Tucker, Pennsylvania State University, State College, Pennsylvania  
- Virtual Reality Development with the Oculus Rift

Fall 2014 – Spring 2015 **Research Assistant**, Mobile Computing and Networking Lab under Guohong Cao and Wenjie Hu, Pennsylvania State University, State College, Pennsylvania  
- Development in Mobile Sensor Networks

Fall 2013 – Spring 2014 **Research Assistant**, Design Analysis Technology Advancement Lab under Dr. Tucker, Pennsylvania State University, State College, Pennsylvania  
- Text Mining with Massive Open Online Courses

### **AWARDS AND HONORS**

2015 Penn State Computer Engineering Student Marshall  

- Represent all Spring 2015 program graduates.

2014 Microsoft Intern Azurathon Winner  

- Hackathon using Azure and Azure Machine Learning. Developed *Prediction Center* – A machine learning cloud based solution that predicts the ideal location of a data center.

- 2013 – 2015 Phi Kappa Phi Member
- Top 7.5% GPA of Juniors, and Top 10% of Seniors
- 2014 19<sup>th</sup> out of over 2100 business students in the All-American stock competition run by Institutional Investor
- 31.61% increase in less than 4 months.
- 2013 Microsoft Data Platform Group Techfest Winner
- *OneDash* – project that assigns a risk analysis to code reviews to help developers find bugs earlier in the pipeline.
- 2013 Microsoft Intern ThinkWeek Winner
- *Toast News* – bring personalized news to your Operating System.
- 2011 Champion of CodePSU competition
- Daylong team coding competition, sponsored by Microsoft.
- 2011 - 2015 Dean's List
- Minimum 3.5 GPA required each semester

## **SCHOLARSHIPS**

- 2011-2015 SCHREYER HONORS COLLEGE SCHOLARSHIP  
**Maintain above a 3.4 GPA every semester**
- 2011-2015 LEONHARD ENGINEERING SCHOLARSHIP  
**Maintain above a 3.5 GPA in an engineering major every semester**
- 2013-2014 LOCKHEED MARTIN COMPUTER ENGINEERING SCHOLARSHIP  
**Top Performer in Computer Engineering Academically**

## **PUBLICATIONS**

- 2015 **B. Dickens**, G. Harms, S. Sellers, O. Shartle, C. S. Tucker "A Proposed Virtual Reality System for Minimizing Information Loss in Multi-User Scalable Environments," in *ASME 2015 International Design Engineering Technical Conferences and Computers and Information in Engineering Conference*, 2015.
- 2014 C. S. Tucker, **B. Dickens**, and A. Divinsky, "Knowledge Discovery of Student Sentiments in MOOCs and Their Impact on Course Performance," in *ASME 2014 International Design Engineering Technical Conferences and Computers and Information in Engineering Conference*, 2014, pp. V003T04A028–V003T04A028.

## **CONFERENCES**

- 2015 ASME IDETC/CIE/AM3D CONFERENCE & EXPO, DETC2015-47414, "A Virtual Reality Approach for Minimizing Information Loss in Multi-

2015 TEACHING AND LEARNING WITH TECHNOLOGY SYMPOSIUM,  
State College, Pennsylvania

## **WORK EXPERIENCE**

2014 Program Manager Intern, Microsoft – Azure User Experience  
(Redmond, WA)

- Worked on a new feature to allow web experimentation on Microsoft's cloud - Azure. Built the service for customizable beta and A/B testing, as I created, designed, and managed the project into production. Resulted in improved agility for all sectors of Azure with faster development cycles and the ability to test features in production.

2013 Program Manager Intern, Microsoft – Server & Tools (Redmond, WA)

- Worked on a Visual Studio extension app called OneDash. Developed a risk level for code reviews feature by applying a machine-learning model to the code changes. Feature decreased bugs post-check-in companywide.
- Managed initial actions on another project of Recommended Reviewers for Microsoft's internal code reviews.

## **RESEARCH PROJECTS**

2015 C. S. Tucker, A. Bharathi, "Investigating the Impact of Interactive Immersive Virtual Reality Environments in Enhancing Online Engineering Design Activities," in *ASME 2015 International Design Engineering Technical Conferences and Computers and Information in Engineering Conference*, 2015.

- C# and JavaScript written, developed and programmed the virtual reality environment for research publication on Unity3D Engine.

2015 *Text-Me-Not* – Information Sciences and Technology IdeaMaker challenge. Objective-C written, in which the users are rewarded for not using their phone while driving.

2015 *EcoMarathon Car* – Shell sponsored school project in which our team of 18 students built a hybrid car to run on as little battery energy as possible. I helped with the battery and battery management system to balance the cells in an efficient manner.

2014 *Brayn Game* – Objective-C written, multiplayer game that involves competing with your friends in mini-games that help you learn.

2014 *HuskyBot* – Verilog written, our team programmed a microcontroller for a Husky Robot to traverse terrain and not fall over.

2014 *Prediction Addiction* – Python written, machine learning algorithm to predict defaults on loans. Competed in Kaggle's 2013 loan default

2013	<i>Course Management System</i> – Java written, built to function as a class management and organizational structure for both students and teachers to use.
2012	<i>Unscramble with Friends</i> – C++ written, an algorithm that can randomly generate and solve all possible words to find in an NxN square.
2011	<i>Soldier AI</i> – Java written, built an artificial intelligence algorithm for soldiers in a mini-game to beat another player's artificial intelligence algorithm for their soldiers.

### **SERVICE AND LEADERSHIP**

2015	Founder and President of the Penn State Virtual Reality Club
2015	Penn State Schreyer Honors College Leadership Assessment Center
2013	Microsoft Product Fair Intern Leader <ul style="list-style-type: none"> <li>Led over 40 other interns in coordinating the end of the year product fair for Microsoft Server &amp; Tools.</li> </ul>
2012-2015	Academic Chair of Phi Kappa Sigma Fraternity <ul style="list-style-type: none"> <li>Highly involved in THON – philanthropy fighting pediatric cancer, and the Leukemia and Lymphoma Society – philanthropy fighting blood related cancers.</li> </ul>
2011-2015	Ministry Leader in Reformed University Fellowship Christian Organization at Penn State

### **COMPUTER SKILLS**

Programming Language	C, C++, Java, R, Python, Mathematica, MATLAB, MIPS, Assembly, Verilog, VHDL
Web Programming	HTML, CSS, ASP.NET, Razor, JavaScript, Node.JS, PHP, REST, MySQL, Perl, Apache HTTP Server, phpMyAdmin
Mobile Programming	Objective-C, Swift, C#
Cloud Computing	Microsoft Azure, Amazon Web Services
IDE	Netbeans, XCode, Microsoft Visual Studio, WebMatrix, Eclipse, Xilinx ISE, Zend Studio, OpenSim, Unity3D Engine, MARS MIPS simulator
Design	Balsamiq Mockups, InVision

### **References**

Available Upon Request