

Ethan Graham Holder
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EDUCATION:

Virginia Polytechnic Institute & State University, Blacksburg, VA. 24060
Master of Science in Computer Science and Applications.
GPA: 3.825 Graduation: May 2015

Virginia Polytechnic Institute & State University, Blacksburg, VA. 24060
Bachelor of Science in Computer Science in honors with Business and Mathematics minors.
GPA: 3.697 Graduation: May 2014

William Byrd High School, Vinton, VA. 24179
Advanced Studies Diploma with Dual Enrollment courses.
GPA: 4.21 Class Rank: 1st of 295 Graduation: June 2010

ACTIVITIES:

g2g (Googler to Googler) Jedi Program Teacher (2015-Current)
Google IO Extended Volunteer (2016)
Historic Flight Foundation Flight Day Volunteer (2016)
Google Serve Lake Sammamish Park Cleanup Volunteer (2016)
Habitat for Humanity Volunteer (2016)
MathCounts Regional and State Competitions Volunteer (2016)
Upsilon Pi Epsilon Computer Science Honor Society President (2013-2015)
Upsilon Pi Epsilon Computer Science Honor Society Member (2012-2015)
Virginia Tech Intramural Basketball Male Team Captain (2014)
Virginia Tech Intramural Flag Football Male Team Captain (2010, 2013)
InVenTs Leadership Team at Virginia Tech (2012-2013)
Virginia Tech Honors Student (2010-2014)
Galileo Engineering Community at Virginia Tech (2010-2012)
Virginia Tech Intramural Flag Football Co-ed Team Captain (2010)
Manna Ministries Volunteer (September 2009-January 2010)

HONORS & SCHOLARSHIPS:

Google \$1000 spot bonus from Michael Irons (2017)
Google \$175 peer bonuses from Chris Hein, David Karam, Amir Safavi, Derek Slovin, Eric Beach, Mike Tyka, and Carise Fernandez (2015-2017)
Virginia Tech Dean's List with Distinction (2010-2014)
Virginia Tech Frank M. Fazio General Engineering \$3100 Scholarship (2013)
Virginia Tech May Electrical Engineering \$2000 Scholarship (2011-2012)

Virginia Tech Computer Science Research Consortium \$2000 Scholarship (2012)
Virginia Tech Computer Science Research Consortium \$1500 Scholarship (2011)
American Electric Power \$7000 Scholarship (2010)
Roanoke County General Foundation Scholarship (2010)

RESEARCH & PUBLICATIONS:

MS Thesis Research, Department of Computer Science, Dr. Eli Tilevich
Thesis Committee: Dr. Eli Tilevich (CS, Chair), Dr. Amy Gillick (Music), Dr. Ben Knapp (CS)
Virginia Polytechnic Institute and State University, Blacksburg, VA, December 2014 – May 2015
Musiplectics (Paper submitted to ONWARD'15) (Thesis submitted to VT Graduate School)

- Define an objective platform for analyzing musical complexity based on fundamental elements of music for all instruments.
- Implement software system to parse MusicXML using the visitor pattern, which tokenizes, weights, and aggregates musical elements into a complexity score.
- Compare objective complexity scores to subjective grades based on instructional syllabi.

Holder E. Musiplectics: Computational Assessment of the Complexity of Music Scores. *Virginia Polytechnic Institute and State University*, Master's Thesis, April 23, 2015.

Holder E. Musiplectics: Computational Assessment of the Complexity of Music Scores. *ONWARD! 2015*, ACM International Symposium on New Ideas, New Paradigms, and Reflections on Programming and Software (Onward!), October 25-30, 2015.

Undergraduate Research, Department of Computer Science, Dr. Eli Tilevich
Honors Bachelor's Thesis Committee: Dr. Eli Tilevich (CS, Chair)
Virginia Polytechnic Institute and State University, Blacksburg, VA, January 2014 – May 2014
Native Gap (2nd Prize at Virginia Tech Undergraduate Research in Computer Science, VTURCS)

- Implement software system to translate generic HTML and PhoneGap applications into identical native Android applications.
- Conduct in depth literature review on state of translation systems surrounding HTML.
- Develop and find generic HTML applications for acceptance testing.

Holder E. Native Execution of Mobile Applications Across Platforms. *Virginia Polytechnic Institute and State University*, Honors Bachelor's Thesis, May 7, 2014.

Undergraduate Research, Department of Computer Science, Dr. Eli Tilevich
Virginia Polytechnic Institute and State University, Blacksburg, VA, January 2013 – May 2013
Cloud Twin (2nd Prize at Virginia Tech Undergraduate Research in Computer Science, VTURCS)

- Implement software system to translate Android applications into identical native Windows Phone applications.
- Define intermediate code structure as basis for translating between mobile operating systems.
- Develop Android and Windows Phone applications for acceptance testing.

Holder E., Shah E., Davoodi M., Tilevich E. Cloud Twin: Native Execution of Android Applications on the Windows Phone. *Automated Software Engineering*, New Ideas, November 11-15, 2013.

Holder E. Cloud Twin: Interactive Cross-Platform Replay for Mobile Applications. *SPLASH*, ACM SRC, October 26-31, 2013.

WORK EXPERIENCE:

Full-time

Web Solutions Engineer I & II, Google, Michael Irons (Manager) and Eric Beach (Teammate)
Google, Kirkland, WA, August 2015 – Present

- Designed, prototyped, implemented, and maintained tools and solutions for enterprise customers.
- Lead cross-functional project developing improved launch process for cloud product teams.
- Received 9 different gThanks awards ranging from kudos to peer and spot bonuses.
- Contributed supplementally to various internal and production services outside of focus area.

Internships

Software Development, Microsoft, Raymond Parsons (Manager) and Salil Bapat (Mentor)
Microsoft, Seattle, WA, May – August 2014

Package Manager Graph Database Project

- Develop Javascript software for visualizing enterprise package management solution.
- Implement C# interfaces for Neo4J-based backend graph infrastructure.
- Transition existing query structure from pre-calculated values to an extensible framework.

Software Development, IBM, Frank Marullo (Manager) and Jose Rodriguez (Mentor)
IBM, Austin, TX, May – August 2013

Security Access Manager Project

- Develop Java software for enterprise security platform.
- Implement REST interfaces for Java-based backend framework.
- Plan, evaluate, and present work items within agile paradigm.

Co-op

Software Development, IBM, Andrea Bailey (Manager) and Adrian Rodriguez (Mentor)
IBM, Research Triangle, Raleigh, NC, January – December 2012 (August – December part time)

Update Package Verification Project

- Develop Java software to test device driver and firmware update packages.
- Implement shell/terminal calls on Windows and Linux from Java.
- Plan, evaluate, and present work items within agile paradigm.

On Campus Work

CEED, Center for the Enhancement of Engineering Diversity, Susan Arnold-Christian
Virginia Polytechnic Institute and State University, Blacksburg, VA, August 2014 – May 2015
Graduate Teaching Assistant for Galileo Seminar

- Teaching three sections of freshman engineering students as the instructor of record.
- Coordinating events promoting diversity in engineering.
- Constructing and grading weekly professional and academic development assignments.

SWAT (Software Assistance and Triage), College of Engineering, Jeff Lewis
Virginia Polytechnic Institute and State University, Blacksburg, VA, Seasonally 2011-2014
SWAT Office Technician

- Perform software and OS installations.
- Troubleshoot software problems for any Windows or OS X compatible computer or tablet.
- Recover lost or corrupted data across hard disk, hybrid, and solid state drives.

InVenTs, Center for the Enhancement of Engineering Diversity, Susan Arnold-Christian
Virginia Polytechnic Institute and State University, Blacksburg, VA, August 2012 –May 2013
InVenTs Team Member

- Orient freshman through the transition from high school to college.
- Plan design competition events for cross-discipline freshman.
- Organize mentor teams and events for cross-discipline mentors.

Galileo, Center for the Enhancement of Engineering Diversity, Susan Arnold-Christian
Virginia Polytechnic Institute and State University, Blacksburg, VA, April 2011 – May 2012
Galileo Mentor and Team Member

- Orient freshman through the transition from high school to college.
- Tutoring freshman for classes in which they might be struggling.
- Planning social activities for groups of freshman.