

John D. Duncan, III

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Work Experience

Quorum Analytics

Software Engineer

1050 Connecticut Avenue NW, Washington, DC

March 2018 - Present

- Developing code that collects, interprets, organizes, and presents legislative data on the Quorum SaaS platform. Responsibilities include:
 - Re-write of core portion of Quorum **Search** using React, Django, Tastypie, Redux, Stylus, ES6.
 - Re-designed site-wide style to include media queries and removed thousands of stale style rules.
 - Bi-monthly **deployment, on-call, dev-ops, full-stack** projects
 - “**Learning Lab**” presentations, organization of weekly dev-team **social events**, on-site client demos

Massachusetts Institute of Technology: Lincoln Laboratory (MIT LL)

Software Engineering Research Intern (DoD Secret Clearance)

Lexington, MA

Summer 2016

- Worked with the Humanitarian Assistance and Disaster Relief Systems Group (Division 4 Group 44) on the **Local Evacuation Alert Verification (LEAV)** program for **HURREVAC-eXtended (HVX)**. Wrote and designed an **Android application** for end users (LEAV) and a **JavaScript** module for the Emergency Manager front-end (HVX). Agile development cycle. Participated in a DHS defense workshop.
 - **Centralized** all continental U.S. evacuation zones into one database.
 - **Reduced** WFS-T call size by multiple orders of magnitude.
 - Gave a final **presentation** to the broader Group 44.
 - The FEMA/DHS sponsor for the project was pleased with the final outcome.
 - Slides and laudatory Supervisor’s Assessment available upon request.

Gettysburg College Computer Science Department

Software Engineering Research Intern

Gettysburg, PA

Summer 2015

- Worked with Professor Chuck Kann developing a Gettysburg Monuments **Android** application (published to the Google Play Store) and **website**.

Education

B.S. in Computer Science Honors (3.60) and Philosophy Honors (3.73)

Gettysburg College, Gettysburg, PA

May 2017

Outstanding Computer Science Student Award

Eisenhower Institute Undergraduate Fellow

Dean’s Honors List

Dean’s Commendation List

Class of 2017

2016-2017

Fall 2015/2016, Spring 2017

Fall 2013

Computer Science

Capstone *Adam's Wellness Family Connection Website Team Project*

Adviser: Dr. Rod Tosten

- Presented **seven colloquia** to the department and broader Gettysburg community.
- Represented the Computer Science Department during the **Spring 2016 Get Acquainted Day**.
- Organized & facilitated two "**Hour of Code**" sessions for local students in the Adams County area.
- Led **three teams** that completed Android applications (two of which were published).

Philosophy

Thesis *Virtual Futures: Virtuality as Political Praxis*

Adviser: Dr. Lisa Portmess

Capstone *Infinite Horizons: The World to Mind Question*

Adviser: Dr. Daniel DeNicola

- Co-moderated a Philosophy Department **Socratic Club Seminar** about the future of work.
- Writing samples available upon request.

Eisenhower Institute Undergraduate Fellow

Program offers a select group of eight Gettysburg College students the chance to develop their **leadership skills** and knowledge & understanding of **public policy**. Our research focus was refugee policy and our adviser was **Dr. Shirley Anne Warshaw**, Harold G. Evans Chair of Eisenhower Leadership Studies.

- Researched and wrote the 'New Technologies' section for our **State Department Diplomacy Lab** White Paper on **Health Care Records in Mixed-Migration settings**. We presented our findings to the *Office of Economic Security, International Health and Biodefense Population, Refugees, and Migration* at the State Department.
 - Physical research for this project included: a trip to the United Nations, dinners, and in person meetings with experts in Europe and resettled Syrian refugees in Pennsylvania.
- Co-organized and moderated two panels that detailed current issues in **public policy, national security, civics, and refugee rights**.
- Gave a presentation detailing our research to the **EINAC** (Eisenhower Institute National Advisory Council). Members of the EINAC include the granddaughter of a past U.S. president, the president of Gettysburg College, a member of the 9/11 Commission, and other notable donors and alumni.

Technical

Languages	Go, JavaScript, Java, C++, C some Python, Mips ASM, Scheme R5RS, Emacs Lisp, and Visual Basic.
Web	HTML5, CSS3, XUL, DOM, XPCOM, Jira some Ruby, PHP, and Perl JSON, GIS, REST, WFS, AJAX, geoJSON net/http , Apache, Lighttpd, Nginx NoSQL , some SQL
Protocols	upspin , https, irc, gopher, nntp, ftp, ldap
Tools	Git , Hg, Svn, Cvs Emacs, GIMP, Regex, L^AT_EX , Blender Android SDK, EXT-JS, OpenLayers, Google Maps API, Maven, Gradle
Unix/Plan9	Sh, Sed, Awk, Grep, Rc GNU/Linux, Android, macOS, Darwin/XNU, OpenBSD, GCC, Clang ffmpeg, cygwin, xquartz, pkg-src, homebrew, macports, fink
Images/3d	xface , png, gif, jpeg, xbm, xpm, blit ikon, geoworks bit, ilbm/pbm, base64, picons, gravatar, ogre3d

- Disclosed two bugs extant in the Gettysburg Campus Navigation Portal (CNAV) electronic record keeping system. The first bug allowed any user to **delete** any other **user account** from a CNAV ‘group’ (mailing list). The second bug **leaked** all internal account images to the web. Received a cash award.

Side Projects (<http://cs.gettysburg.edu/~duncjo01/assets/portfolio.html>)

- **messagefaces**: XUL/XPCOM add-on that displays popular & recondite ‘face’ images from email headers.
- **weather**: JavaScript on my homepage that displays a 7-day weather forecast using art that I made.
- **faces**: Go library that converts an XFace to PNG and performs picon lookups from a picon database.
- **blog/wiki**: Go micro-(blogging/wiki) platform.
- **macfonts**: Converted all ‘80s resource fork Macintosh fonts to data fork fonts for use on macOS.
- **pokersquares**: Designed/wrote an Android app that uses an Expectimax NARL AI player.
- **redlight**: Designed/wrote an Android app that uses an ANN AI player for the game of Pig.
- **hog**: Managed and designed/wrote an Android app that plays a modified version of the game of Pig.
- **screenfetch**: Ported the popular system information script to macOS.
- **archive**: Archived many esoteric patterns, bitmaps, clip art, screensavers, and fonts from 1973-1999.

Presentations (<http://cs.gettysburg.edu/~duncjo01/assets/about.html>)

Talks

- Socratic Club Seminar (future of work) *Spring 2017*
- Computer Science Capstone Colloquium *Fall 2016*
- Internship Colloquium *Spring 2016, Fall 2016*
- Computer Science Department “Get Acquainted Day” *Spring 2016*
- Hitchhiker’s Guide to Computer Science Colloquium *Fall 2015/2016, Spring 2016*
- Gettysburg College Celebration *Spring 2015/2017*

Planned/Moderated

- Programming Competition Colloquium *Spring 2017*
- Student Solidarity Rally *Spring 2017*
- EI Panel: Lady Liberty’s Poor and Huddled Masses: *Rethinking Refugees in America* *Spring 2017*
- EI Panel: We Want You...Or Do We? *A Panel on Refugees & Asylees Coming to the U.S.* *Fall 2016*
- We Won’t Stand for Hate at Gettysburg College *Fall 2016*
- Political Debates *Fall 2015/2016, Spring 2016*
- Hour of Code Colloquia *Fall 2015/2016*

Governance

Gettysburg Association for Computing Machinery (ACM) chapter

- Vice President *2016-2017*
- Secretary *2015-2016*
- Student Senate Representative *2015-2017*

Gettysburg College Independents

- Treasurer *2016-2017*
- Organized and moderated three political debates between the College Democrats and College Republicans.

Gettysburg Anti-Capitalist Collective (GACC)

- Leftist political organization. Organized debates, events & rallies, distributed zines, and participated in campus activism projects. Club also served as a welcoming space for politically and socially marginalized LGBTQA+ students.
- Student Senate Representative 2016-2017

References

Contact information for references available upon request.

Charles E. Rose	<i>Associate Technical Staff</i>	MIT Lincoln Laboratory
Dr. Todd W. Neller	<i>Professor</i>	Gettysburg College Computer Science Dept.
Dr. Lisa Portmess	<i>Bittinger Professor of Philosophy</i>	Gettysburg College Philosophy Dept.
Dr. Shirley Anne Warshaw	<i>Professor</i>	Gettysburg College Political Science Dept.
Dr. Charles W. Kann, III	<i>Adjunct Professor</i>	Johns Hopkins Whiting School of Engineering