Patrick Kage

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CHOATE ROSEMARY HALL	Wallingford, CT		2016
Honors: Grade 12	**ACT:** 34/36		**Subjects: Math II:** 750 **Physics:** 760
<u>**Honors: Senior:**</u> Application Design	**Sophomore:** Chemistry		**Freshman:** Physics, Algebra II
<u>**Advanced Placement:**</u>	**Senior:** Statistics	**Junior:** Computer Science, 5 AP Exam	

A W A R D S

Dean's Awards	Excel in All Subjects	Fall 2016, Winter 2016 and Spring 2016	
Yearbook Superlative	Most Likely to Invent the Next Big Thing		2016
Choate Press Features	Alumni Bulletin	Feature Story	Spring 2016
	Choate News	Highlighted	April 2016
Advanced Computer Science	Award for Excellence	Honorable Mention	2016
	Award for Excellence	First Place	2015
She++	Fellowship Award	Stanford University	April 2016
National Merit Program	Student Award	Commended	2014

P R E S E N T A T I O N S

Choate Rosemary Hall			**2015 - 2016**
Revisit Day	**Conversed with Applicants**	Spring 2015, April 2016 (x2)	
Computer Science/Math Dept.	Summer accomplishments described to class		
College Counseling Office	Presented Junior Summer Opportunities		January 2016
She++	**Fellow, Speaker**	**Stanford University**	**2014**

Addressed our Programming Club's successful inclusiveness of gender and ethnic diversity and the members' overall high achievement levels.

L A N G U A G E S

English: Native	**Polish:** Conversational	**Mandarin:** Intermediate

E X T R A C U R R I C U L A R S

Programming Club	**Founder**	**Hours:** 480 hours	**2012 - 2016**

Solely responsible for computer science curriculum development, taught and ran coding workshops. Orchestrated assignments, added classes, and did strategic planning. Handled faculty interactions for equipment and materials. Applied and received $1000.00 Google grant. Resulted in the hiring of a dedicated computer science teacher and increasing course choices from 2 to 7 per year with 200+ enrolled students/year from the previous 20.

Math Team	**Member**	**Hours:** 40 hours	**2012 - 2014**

Competed in tournaments and attended weekly meetings.

A C A D E M I C   P R O G R A M S

Johns Hopkins Center for Talented Youth	**Student**	**Hours:** 720 hours	**2013, 2014**

College-level courses: robotics, inductive/deductive reasoning, cryptology, computer science, electrical engineering, and biology.

Stanford University	**Student**	**Hours:** 182 hours	**Summer 2014**

Explored Objective-C application design for iOS devices.

E M P L O Y M E N T

NASA Jet Propulsion Laboratory (JPL) **Intern, Research Software Engineer**		**Hours:** 400 hours	**Summer 2016**

Based out of JPL's 397-F (Ops Lab Human Interfaces Group) to develop mission formulation software to enable design of satellite propulsion systems in support of Team X and Xc's model-based systems engineering and foundry modernization initiatives. Resulting project made part of JPL's long-term strategic plan. Invited to return for internship summer 2017.

MIT STAR Lab	**Intern, Research**	**Hours:** 280 hours	**Summer 2015**

Developed task scheduler monitor for the MiRaTA microsatellite RTOS (Salvo) and Flask/Python-based web dashboard for ground station monitoring and control. Personally presented work at MIT/US Department of Defense Lincoln Laboratory. Worked remotely with NASA's Jet Propulsion Lab (JPL) to identify existing spacecraft buses to fit proposed mission payloads by meeting user-specified constraints (cost, power, etc.). Resulted in JPL invitation for spring facility tour in preparation for summer 2016 internship.

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C O M M U N I T Y   S E R V I C E

Hartford Capital Classics	Developer	**Hours:** 20+ hours	2015 - 2016

Redesigned and maintained Shakespearean non-profit group's website to attract audiences and donors.

St. John's Middle School	Instructor	**Hours:** 8 Hours	2012 - 2016

Prepared and taught a class in robotics to 10 7th-graders

St. Dunstan Church	Member/Volunteer	**Hours:** 30 hours	2012 - 2016

Numerous events and fundraisers. Helped with Christmas decorations, kitchen, and running cookout.

Choate Rosemary Hall	Boars Against Hunger	**Hours:** 12 Hours	2012 - 2016

Worked with Harvest Pack to package meals for food shipments to insecure families in Haiti and the U.S.

C O M P U T E R   S C I E N C E

NASA Jet Propulsion Laboratory	Intern, Software Engineer	**Hours:** 80 hours	March 2016

Invited to spend spring break at JPL in an exploratory capacity, shadowing Team X and Xc operations.

Hewlett Packard Code Wars	Team Captain/Organizer	**Hours:** 4 hours	March 2015

Intense coding competition for high school students.

Stanford University, She++ Diversity Summit	Speaker	**Hours:** 48 hours	April 2014

Spoke at Google, Facebook, Microsoft, and Oracle panels about gender diversity in computer science.

P E R S O N A L   S P O R T S

Tennis	Weightlifting	Running	Bicycling	Rowing

M U S I C

Piano:	Tutoring	Glastonbury/Choate	2006 – Present
Guitar:	Self-taught		2015 – Present

S K I L L S

Adobe Creative Suite 6

Illustrator	Poster making, print design, web design, application mockups
Photoshop	Photo enhancement/composition
Premier/After Effects	Video production

Application Development

Web Application Development	HTML/CSS/JS, Node.js, Python, MongoDB
Native Application Development	Python, Electron, Objective-C
Systems Programming	C/C++, PIC24 Assembly

Cybersecurity

Reverse Engineering	Hex editing, disassembly, exploit generation
Pentesting	Metasploit, Ettercap, Wireshark

Software

MS Office	**PyCharm** (Python IDE)	**CLion** (C/C++ IDE)
XCode (Objective-C/C/Swift/C++ IDE)	**Terminal**	**Vim** (Text editor)
Final Cut Pro (Video production)		

T R A V E L

Domestic: California, Connecticut, Florida, Maine, Maryland, Massachusetts, New Hampshire, New York, Pennsylvania, Rhode Island, Vermont, Washington DC

International: Austria, Canada, Czech Republic, Germany, Greece, Italy, Liechtenstein, Mexico, Poland, Switzerland, United Kingdom