JACOB AARON CHVATAL

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EDUCATION

Northeastern University	Bachelor of Science, Computer Science	**Expected December 2021**
Honors Program	Previous Coursework: *AP Computer Science A, AP Computer Science Principles, AP Calculus AB,*	
College of Computer and	*AP Calculus BC, AP Physics C, AP Chemistry, AP Biology*	
Information Sciences	Currently Enrolled: *Accelerated Fundamentals of Computer Science, Honors Discrete Structures, Linear*	
Boston, MA	*Algebra, Technology and Human Values, Honors Discovery*	

RELEVANT EXPERIENCE

Northeastern University – *Undergraduate Research Assistant;* Boston, MA   September 2018 – Present
- Currently working in the Urban Informatics and Resilience Lab under Prof. Ryan Qi Wang
- Parsing and analyzing verbose Google Places data of 50+ major United States cities
- Developing visualizations of Google Places data to associate with behavior of individuals during disasters

CDK Global – *Software Development Intern;* Portland, OR   June 2018 – August 2018
- Developed a React.js web application with Material UI components
- Practiced Agile/Scrum methodologies through Atlassian Jira, Confluence, and Stash

Portland State University – *Student Intern;* Portland, OR   June 2017 – August 2017
- Compressed and referenced sparse matrix data with CSR (Compressed Sparse Row) format
- Distributed C++ code to PSU's COEUS Cluster with OpenMP parallel programming pragmas
- Utilized matrix operations to analyze and graph large 4D mesh structures and Enron network communications

PROJECTS

Three.js Animated Personal Website   July 2018
- Scanned various objects into .obj file format via Microsoft Kinect
- Set 3D coordinate trajectories of objects for smoothly flowing animations with Three.js
- Rendered plain HTML subpages within app to allow for effective viewing without WebGL technology

Virtual Car - CDK Global Hackathon   July 2018
- Designed and manipulated virtual 3D car models in Blender to add mobility
- Compiled various car models, roads and other assets into a SteamVR Unity Environment
- Emulated car selection, opening door handles, driving and steering of car models with C# and Unity

Leadership

Oregon Youth Soccer Association – *Referee;* Portand, OR   July 2013 – July 2018
- Referee for U9 to U19 age groups in recreational and TTPL (competitive) leagues
- Refereed for over 100 gold division competitive games and hundreds of recreational games

Photography Club – *President, Activity Leader*   September 2016 – June 2017
- Organized and held meetings and workshops at various parks in the greater Portland area
- Managed club emails and social media, informing club members of photography opportunities

Oregon Model United Nations – *Committee Chair*   September 2016 – April 2018
- Supervised and graded position papers written by greater Portland area Model UN students
- Facilitated simulated debates between over fifty delegates in committees for three-day periods

Awards

National Merit Scholarship Corporation– *National Merit Finalist*   September 2017
College Board– *AP Scholar with Distinction, National AP Scholar*   July 2016, July 2017, July 2018

SKILLS

Programming Languages: C++ (Including Arduino), Java, Python, JavaScript, Lisp, Git
Technologies: React.js, Three.js, Microsoft Kinect SDK, Windows Subsystem for Linux, ROS
Computer Skills: Adobe Photoshop, Lightroom, Premiere Pro; Microsoft Office, Visual Studio, IntelliJ
Foreign Languages: Spanish (intermediate)