IP ASSIGNMENT AND NONDISCLOSURE AGREEMENT

This Agreement is made between ___*Joseph Aronson*___, an undergraduate student at the University of California, Santa Cruz ("UCSC") with a home address of ___*208 Hubbard Street, Santa Cruz, CA 95060*___, ("Student") and Cisco Systems, Inc., a corporation having a business address at 170 West Tasman Drive, San Jose, California ("Company").

WHEREAS, Student seeks to participate in UCSC's 2018/2019 Corporate Sponsored Senior Projects Program in the Jack Baskin School of Engineering ("Capstone Project").

WHEREAS, Student and Company plan to engage in a collaborative research and design project ("Senior Design Project") as part of the Capstone Project. The proposal for the Senior Design Project is shown as Attachment A to this Agreement.

WHEREAS, Company wishes to secure sole rights to any and all intellectual property developed by Students in connection with the Capstone Project, and Student wishes to assign such sole rights to Company.

NOW, THEREFORE, in consideration of the foregoing recitals, and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the parties hereto hereby agree as follows:

1. Assignment. Student hereby irrevocably assigns, transfers and conveys, and agrees to assign, transfer, and convey, to Company all of Student's rights, title, and interest throughout the world in and to all tangible and intangible results and items arising out of or constituting the results of any development work created in connection with the Capstone Project ("Inventions") and any and all intellectual property rights therein and thereto, including, without limitation, all current and future worldwide patents and other patent rights, utility models, copyrights, mask work rights, trade secrets, and all other intellectual property rights ("Intellectual Property Rights").

2. Waiver of Rights. If any Intellectual Property Rights, including moral rights, in any Invention cannot (as a matter of law) be assigned by Student to Company, then (i) Student hereby unconditionally and irrevocably waives the enforcement of such rights and all claims and causes of action of any kind against Company and any of its licensees, successors, or assigns with respect to such rights, and (ii) to the extent Student cannot (as a matter of law) make such waiver, Student hereby unconditionally grants to Company an exclusive, perpetual, irrevocable, worldwide, fully-paid-up, royalty-free license, with the right to sublicense through multiple levels of sublicensees, under any and all such rights (a) to reproduce, create derivative works of, distribute, publicly perform, publicly display, digitally transmit, and otherwise use the applicable Invention in any medium or format, whether now known or hereafter discovered, (b) to use, make, have made, sell, offer to sell, import, and otherwise exploit any product or service based on, embodying, incorporating, or derived from the applicable Invention, and (c) to exercise any and all other present or future rights (including rights to protect and enforce) in the applicable Invention.

3. No Previous Assignments of Inventions or Intellectual Property Rights. Student represents and warrants that he or she (i) has not previously assigned, licensed, nor granted any option, right, title or interest, in or to any Inventions or Intellectual Property Rights, and (ii) is not under any obligation to, and has not entered into any agreement to, assign, license, nor grant any option, right,

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title or interest, in or to any Invention or Intellectual Property Rights which may be created, made, conceived or reduced to practice, or developed by Student in connection with the Capstone Project.

4. Disclosure. Student will promptly disclose in writing to the Company liason for the Capstone Project all Inventions created, developed, conceived or reduced to practice by Student in connection with the Capstone Project.

5. Cooperation by Student. Student shall execute such documents, render such assistance, and take such other actions as Company may reasonably request, at Company's expense, to apply for, register, perfect, confirm, and protect Company's rights in the Inventions and in Intellectual Property Rights. Without limiting the foregoing, Company shall have the exclusive right to commercialize, prepare and sell products or services based upon, sublicense, prepare derivative works from, or otherwise use or exploit the Inventions and Intellectual Property Rights.

6. Cisco as Attorney-in-Fact. Student agrees that if Company is unable because of Student's unavailability, incapacity, or for any other reason, to secure Student's signature to apply for or to pursue any application for any United States or foreign patents or mask work or copyright registrations covering the Inventions assigned to Company above, then Student hereby irrevocably designates and appoints Company and its duly authorized officers and agents as Student's agent and attorney in fact, to act for and in Student's behalf and stead, to execute and file any such applications and to do all other lawfully permitted acts to further the prosecution and issuance of patents, copyright and mask work registrations thereon with the same legal force and effect as if executed by Student.

7. Confidentiality. It is agreed any information regarding Company's products, services, product designs, plans and roadmaps, prices and costs, trade secrets, know how, inventions, development plans, techniques, processes, programs, schematics, software, data, sales and marketing plans, business opportunities, personnel data, research and development activities, pre-release products, and any information posted on www.cisco.com (to the extent that such information is not publicly accessible), or any other information which Student knows or reasonably ought to know is confidential, proprietary or trade secret information of Company (collectively called the "Company Proprietary Materials") are proprietary and confidential materials of Company. Student shall not disclose the Company Proprietary Materials to third parties and agrees to use in no event less than a reasonable degree of care to prevent the disclosure of the same. This provision shall not apply to Company Proprietary Materials which are (i) already known by Student at the time of disclosure, (ii) publicly known through no unauthorized act of Student, (iii) rightfully received from Student without an obligation of confidentiality, (iv) generally disclosed without similar restrictions by Company to third parties, or (v) required to be disclosed via a court order.

8. Presentation at Capstone Partners' Day Event. Subject to Section 7 (Confidentiality), Student may create posters, slides, and a Capstone Project final report that describe the work done by Student and the results of Student's work (collectively, the "Student Final Work"). As part of the Capstone Project course, Student may (i) submit the Capstone Project final report to Student's professor, and (ii) display the posters and slides at the UCSC Capstone Project Partners' Day event, so long as none of the Student Final Work contains, reveals, or otherwise discloses any Company Proprietary Materials that are subject to non-disclosure obligations under Section 7 (Confidentiality). Student will provide the full and final versions of the Student Final Work to Cisco for review and comments at least ten (10) days before disclosing or delivering such Student

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Final Work to any third party, and with respect to the posters and slides, in no event less than (10) days before the UCSC Capstone Project Partners' Day event. Cisco will notify Student within ten (10) days of receipt of a particular Student Final Work if Cisco has any suggested edits to that particular Student Final Work to limit dissemination of information sensitive to Company and/or to avoid loss of patent rights as a result of premature public disclosure of patentable information. If the parties are unable to agree on a final form of the particular Student Final Work, Student agrees to and will remove all references to Company and any Company-provided information/technology and all Company Proprietary Materials from such Student Final Work. Student will give Company the option of receiving an acknowledgment in any Student Final Work for its sponsorship of the Capstone Project.

9. External Publication. Subject to Section 7 (Confidentiality), Student may publish papers, articles, or other technical publications that describe the work done by Student and the result of Student's work, in each case, with respect to the Capstone Project (each a "Project Paper") so long as the Project Paper does not contain, reveal, or otherwise disclose any Company Proprietary Materials that are subject to non-disclosure obligations under Section 7 (Confidentiality). Student agrees to submit a full and complete draft of any Project Paper to Company for review and comment at least thirty (30) days prior to disclosing or delivering such Project Paper to any third party. Company shall notify Student within thirty (30) days of receipt of the Project Paper if Cisco has any suggested edits to the Project Paper to limit dissemination of information sensitive to Company and/or to avoid loss of patent rights as a result of premature public disclosure of patentable information. If the parties are unable to agree on a final form of the Project Paper, Student agrees to and will remove all references to Company and any Company-provided information/technology and all Company Proprietary Materials from the Project Paper. Student shall give Company the option of receiving an acknowledgment in such Project Paper for its sponsorship of the Capstone Project.

10. Limitation of Liability. UNDER NO CIRCUMSTANCES WILL COMPANY OR ANY COMPANY AFFILIATE BE LIABLE TO STUDENT FOR ANY INCIDENTAL, SPECIAL, PUNITIVE, EXEMPLARY, INDIRECT OR CONSEQUENTIAL DAMAGES WHICH ARISE FROM OR RELATE TO THIS AGREEMENT, WHETHER CLAIMED TO HAVE RESULTED FROM A BREACH OF CONTRACT, THE COMMISSION OF ANY TORT, INCLUDING NEGLIGENCE, EITHER PARTY'S STRICT LIABILITY, OR UNDER ANY OTHER LEGAL OR EQUITABLE THEORY. NOTHING IN THIS SECTION SHALL LIMIT EITHER COMPANY'S LIABILITY FOR BODILY INJURY TO A PERSON, DEATH, OR FOR PHYSICAL DAMAGE TO OR DESTRUCTION OF PERSONAL PROPERTY, INCLUDING DATA. EACH PARTY ACKNOWLEDGES THAT THIS WAIVER OF CONSEQUENTIAL AND OTHER DAMAGES REFLECTS THE ALLOCATION OF RISKS BETWEEN THEM AND FORMS AN ESSENTIAL PART OF THE BARGAIN BETWEEN THEM.

11 Governing Law and Venue. The validity, interpretation, and performance of this Agreement shall be controlled by and construed under the laws of the State of California, United States of America, and the State and federal courts of California shall have jurisdiction over any claim arising under this Agreement. Notwithstanding the foregoing, either party may seek interim injunctive relief in any court of appropriate jurisdiction with respect to any alleged breach of such party's intellectual property or proprietary rights.

12. Severability If any provision of this Agreement is, for any reason, held to be invalid or unenforceable, the other provisions of this Agreement will remain enforceable and the invalid or

unenforceable provision will be deemed modified so that it is valid and enforceable to the maximum extent permitted by law.

13. Entire Agreement. This Agreement, including Attachment A which is incorporated herein by reference, constitutes the entire agreement between the parties with respect to the subject matter hereof, and supersedes and replaces all prior and contemporaneous oral or written communications between the parties relating in any way to the subject matter hereof. This Agreement is intended by the parties to be a complete and wholly integrated expression of their understanding and agreement. This Agreement may only be modified by a written document executed by the parties.
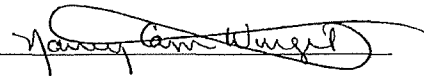

IN WITNESS WHEREOF, the undersigned have executed this Agreement effective as of the date signed by Company's representative below.
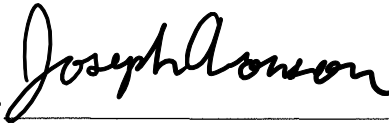

Cisco Systems, Inc. ("Company")

Joseph Aronson

_____ ("Student")

Sign: _____

Sign: _____

Name: Nancy Cam-Winget

Date: 1-28-18

Title: Distinguished Engineer

Date: _____

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PROPOSAL FOR THE SENIOR DESIGN PROJECT

Cisco SBG Research

OBJECTIVES

The threat landscape continues to evolve and grow as attackers become more sophisticated and the number of devices connecting through the Internet are expected to grow to 30B by 2020. With a wide set of threats and IT systems growing in complexity, research into finding ways to improve upon Cisco's Security product portfolio and technologies become a key component to Cisco's security health and business success.

As part of Cisco's Security Business group, an advanced research group is focused on further improvements in network intelligence, security and advanced threat. We have several projects that span the many aspects of security that span areas such as vulnerability, threat and risk assessment, detection, mitigation and management. Of particular focus for this request is a project focused on behavioral based intrusion detection.

REQUIRED SKILLS

With a team comprised of network security experts and data scientists we are looking for strong software engineers and in particular those specializing in user interface design. The required skills include:

- Strong programming skills, preferably with experience using Python
- Front end design using Angular CLI
- Knowledge of networking and security preferred
- Knowledge of C/C++ or Java

EQUIPMENT / FACILITIES NECESSARY

Computing resources (VMs) to develop the front-end application and network connectivity.

EXPECTED DELIVERABLES / DESIRED OUTCOMES

The project involves developing and delivering a front-end application to integrate an intrusion detection engine co-located in a network device communicating to some device simulations. The front-end application will demonstrate the engine's ability to affect intrusion detection of these devices as it communicates through the network device.