

# Abhay Gupta

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## EDUCATION

|                                 |  |                     |
|---------------------------------|--|---------------------|
| <b>University of Washington</b> | M.S. - Robotics and Controls<br>• Thesis: Graphical modeling of Optical Tweezers & Regression Models | Sep 2018 - Dec 2019 |
| <b>Santa Clara University</b>   | M.S. Computer Engineering (Incomplete)<br>• Transferred to University of Washington    3.8           | Sep 2017 - Jun 2018 |
|                                 | B.S. Mechanical Engineering<br>• Entrepreneurship minor    Graduated in 3 years with honors    3.6   | Sep 2014 - Sep 2017 |

## SKILLS

|                 |  |
|-----------------|--|
| Software:       | Programming: ML, Python, C/C++, ROS, Matlab, OpenGL, Git, Maple, LabVIEW, Simulink, $\LaTeX$<br>Design/Analysis: Ansys CFX, Star CCM+, SolidWorks, Abaqus, Autodesk Inventor |
| Hardware:       | Mechanical: Lathe, Mill, Laser Cutting, 3D Printing<br>Electrical: Oscilloscopes, Function Generators, DC/AC Power Supplies, Soldering                                       |
| Certifications: | Engineer-In-Training, State of CA [05/18]<br>Solidworks CSWA [03/15]   |

## INDUSTRY EXPERIENCE

|   |   |                     |
|---|---|---------------------|
| <b>CSAA Insurance</b><br>Physics Consultant           | • Evaluated novel engineering and physics aspects for patent applications<br>• Researched alternative approaches for products and methods                         | Sep 2018 - Dec 2018 |
| <b>TheraNova</b><br>R&D Engineering Intern            | • Developed a python software analysis system to understand gait measurements<br>• Ensured the software analysis is accurate for 80+ patients                     | Jun 2018 - Sep 2018 |
| <b>Valeo</b><br>Systems Engineering Intern            | • Produced hardware and software demos for automotive OEMs<br>• Collaborated with start-ups and OEMs to develop new cabin safety features                         | Apr 2018 - Jun 2018 |
| <b>Pentair</b><br>R&D Engineering Intern              | • Optimized performance of steady state and transient phases of circuit breakers<br>• Laboratory tested and simulated rail heating to melt snow through Ansys CFX | Sep 2017 - Mar 2018 |
| <b>Accel Biotech</b><br>Mechanical Engineering Intern | • Prototyped medical device components and test assemblies<br>• Supported mechanical, electrical, and software design of a blood diagnostic device                | Jun 2016 - Sep 2016 |
| <b>Caltrans</b><br>Engineering Intern                 | • Reviewed and advised on structural testing for next generation locomotives<br>• Designed a floor plan using Microsoft Visio & participated in vendor meetings   | Jul 2015 - Sep 2015 |

## PUBLICATIONS & PATENTS

|  |          |
|--|----------|
| <b>Automobile Damage Detection using Thermal Conductivity</b><br>J. Schow, and A. Gupta (Patent Pending)   | Dec 2018 |
| <b>A Cellular Automaton for Modeling Non-Trivial Biomembrane Ruptures</b><br>A Gupta, G. Reint, I. Gozen, and M. Taylor (Published in <i>Soft Matter</i> ) | Sep 2018 |

## PROFESSIONAL AFFILIATIONS & ACTIVITIES

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|--|---------------------|
| <b>Numerical Analysis Research Club</b> , (NARC). Graduate Student Member                              | Sep 2018 - Dec 2019 |
| <b>Association of Graduate Engineering Students</b> , (AGES). Co-founder and Student Chapter President | Sep 2017 - Jun 2018 |
| <b>American Society of Mechanical Engineers</b> , (ASME). Student Chapter President                    | Sep 2014 - Jun 2017 |