Abhay Gupta

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Current: Seattle, WA 98104
Portfolio: abgup.com
U.S. Citizen

After taking a leave to help with family, I am transitioning back into the industry when the right job arises. I am currently working on a custom motor driver using the microcontroller, ESP32, for FRC. Most of my other time is occupied with in mentoring college and high school students, volunteering at a bicycle repair coop & makerspace, and a variety of sports/hobbies.

SKILLS

Languages

- Python
- C#
- Javascript
- C++
- LaTeX
- Matlab

Frameworks

- WinForms & WPF
- Flask & Jekyll
- Cordova
- JQuery

Tools

- Git
- Cmake
- Docker

INDUSTRY EXPERIENCE

Kawasaki Robotics — Jun 2022 - Aug 2022
SW Engineer, Robotics
- Develop software to move wafer handling (scara) robots

AS - Domain Specific Language

SummerBio — Oct 2021 - Feb 2022
SW Engineer, Robotics
- Develop software drivers (6 DOF arms, benchtop systems) for VWorks

C# || Figma OnShape

Lam Research — May 2020 - Oct 2021
SW/ME Engineer || 1y6m
- Develop software and mechanical components to optimize a 6 DOF robotic arm
- Lead and assist Android app development

C# || JavaScript || Python || VBA || Figma NX || Teamcenter

CSAA Insurance — Oct 2018 - Oct 2020
Physics Consultant || 2y
- Evaluated novel engineering and physics aspects for patent applications
- Researched alternative approaches for products and methods

University of Washington — Oct 2018 - Oct 2020
Research/Teaching Asst. || 2y
- Evaluated novel engineering and physics aspects for patent applications
- Researched alternative approaches for products and methods

Santa Clara University — Oct 2018 - Oct 2020
Research/Teaching Asst. || 2y
- Evaluated novel engineering and physics aspects for patent applications
- Researched alternative approaches for products and methods

PUBLICATIONS, CONFERENCES & PATENTS

Automobile Damage Detection Using Thermal Conductivity — Dec 2018
J. Schow, and A. Gupta (US Patent)

A Cellular Automaton for Modeling Non-Trivial Biomembrane Ruptures
A Gupta, G. Reint, I. Gozen, and M. Taylor
Presented at the 13th *World Congress in Computational Mechanics (WCCM)* — July 2018
Session: Novel Mathematical Models and Computational Methods, New York, NY
Published in *Soft Matter* — Sep 2018

Certifications:
Engineer-In-Training, State of CA — May 2018
Solidworks CSWA — Mar 2015

VOLUNTEERING ACTIVITIES

The Bikery, Seattle, Bicycle Board Member & Technician
San Jose Bicycle Coalition (SJBC), Softare & Data Consultant
Santa Clara University, Engineering Mentor HTML, CSS, Javascript, Python
San Jose Bicycle Clinic, Bicycle Technician — Jul 2020 - Present
FIRST Robotics Competition (FRC) 254, 5940 & 4180, Engineering Mentor JAVA, Onshape, SolidWorks — Aug 2021 - Present
Reddit Group: r/ControlTheory, Moderator — Dec 2018 - Present

EDUCATION

University of Washington — Sep 2018 - Dec 2019
M.S. Robotics & Data Science
- Thesis - 3D Graphics & Regression Models || 3.6
- Advisors: Steve Brunton & Ashis Banerjee

Python || MATLAB || C++ OpenGL || ROS

Santa Clara University

M.S. Computer Engineering — Sep 2017 - Jun 2018
- Half Completed || Transferred to University of Washington || 3.8

B.S. Mechanical Engineering — Sep 2014 - Sep 2017
- Entrepreneurship minor || Graduated in 3 years with honors || 3.6

MATLAB || LaTeX || C || Simulink || LabVIEW || Maple
Lathe || Mill
SolidWorks || Abaqus || Star-CCM+
Oscilloscopes

INTERNSHIPS || 2y

Microvision
SDE Intern || 3m — Summer 2019
- Modeled the response of Lidar activated SiPM (Silicon photomultipliers)

Simulink || MATLAB

TheraNova
SDE Intern || 3m — Summer 2018
- Developed a python software analysis system to understand gait measurements
- Ensured the software analysis is accurate for 80+ patients

Python || MATLAB

Valeo
Systems Engr Intern || 3m — Spring 2018
- Produced hardware and software demos for automotive OEMs
- Collaborated with start-ups and OEMs to develop new cabin safety features

VBA

Pentair
ME/EE Intern || 7m — Winter 2017
- Optimized performance of steady state and transient phases of circuit breakers
- Laboratory tested and simulated rail heating to melt snow

Ansys CFX || Solidworks
Oscilloscopes, Function Generators, DC/AC Power Supplies, Soldering

Accel Biotech
ME Intern || 3m — Summer 2016
- Prototyped medical device components and test assemblies
- Supported mechanical, electrical, and software design of a blood diagnostic device

SolidWorks
Oscilloscopes

Caltrans
ME Intern || 3m — Summer 2015
- Reviewed and advised on structural testing for next generation locomotives
- Designed a floor plan using Microsoft Visio & participated in vendor meetings