# DANE A. FREDERICK
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## EDUCATION

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| **2015 – Present** | **University of California, Santa Barbara**<br>BS Mechanical Engineering (Anticipated June 2017) |
| **Accolades** | 3.42 GPA - Engineering Honors Program 2015/2016<br>Most innovative award for design project May 2016 |
| **Research** | Currently characterizing dynamic nonlinear phenomena in a high vacuum environment with fixed-fixed microbeams using data acquisition systems for mechanical and structural testing. Use of DAQ, oscilloscope, spectrum analyzer, Laser Doppler Vibrometer |
| **Senior Capstone** | Working on a battery powered, wireless, infrared security camera for FLIR. The project includes heat transfer, material sciences, mechanics, and strong verbal and written communication. As a group, we are all learning about team dynamics, and as a leader, I am ensuring that my mechanical engineering team is on budget and going above goal expectations. |
| **2012 - 2015** | **Ventura College**<br>AS Engineering track studies |
| **Accolades** | 3.65 GPA - Dean's List 2012/2013 |

## EMPLOYMENT

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| **October 2016 - Present** | **Strand Products – Engineering Intern – Goleta, CA**<br>Currently working as a design engineer to facilitate mechanical cable construction. Gained experience working through design methods, creating solid models, soldering circuits, use of electrical test equipment, creating manufacturing drawings, fabricating tools, product testing, quoting and budgeting. |
| **Summer 2016** | **California Home Builders - Engineering Intern - Los Angeles, CA**<br>Gained confidence working in a professional engineering environment. Improved skills in reading and interpreting engineering schematics and structural plans. Worked closely with professionals of all fields, including architects, manufacturers, structural engineers, water systems engineers, electrical engineers etc. Word and Excel use on a daily basis. |

## EXPERIENCE

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| **Matlab/C++** | *5 Years* – Knowledge in basic computational usage, and experience with physical simulations, thermal analysis with simulations of diffusion and advection, and numerical analysis. |
| **AutoCAD/SolidWorks/Comsol** | *4 Years* - Projects included, designed a bridge in SolidWorks and used simulations with structural analysis of the member stress along with geometric dimensioning and tolerancing (GD&T), a skateboard braking system, and many more |
| **3D Modeling with mesher/meshmixer** | *2 Years* - Designed and constructed a working 3D printer requiring microelectronic and motor drive assemblies with stepper motors using general materials. Experience with 3D printer software. |
| **Circuits and Electronics (Pspice & Labview)** | *3 Years* - Numerous projects including: Arduino constructed for 3D printer, Raspberry pi connected for wireless printing, troubleshooting electronics of Arduino, design simple circuits in Pspice for analysis. |
| **Hobbies** | Car mechanic, horse training, RC aircraft design/flying with servo motors |