

# Nikhil Dhawan

• 329766 Georgia Tech Station, 350 Ferst Dr, Atlanta, GA • ndhawan3@gatech.edu • 404-910-6917

## OBJECTIVE

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To secure a Summer'17 internship in order to enhance my skills and gain experience relevant to my major.

## EDUCATION

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### GEORGIA INSTITUTE OF TECHNOLOGY

*Bachelor of Science in Mechanical Engineering* (4th Year)

*Expected Graduation: Dec'17*

#### Minor in Energy Systems

- *Cumulative GPA: 3.62 Minor GPA: 4.0*
- Dean's List: Fall'13 – Spring '16
- Spark Clean Energy National Fellow 2016: Selected as one of 24 undergraduates, graduates, or PhD candidates nationally for an online energy entrepreneurship course taught by MIT faculty, with the fellowship sponsored by Department of Energy.

## WORK EXPERIENCE

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### ROLLS-ROYCE INDIA, Summer Intern

*May'16 – July'16*

- Programmed and designed GUIs in Visual Basic for analyzing Plant Engineer Time-sheets, Booking Projects, and for Load vs. Capacity analysis on the basis of sub-function and skill group of the engineers.
- Documented User Manuals of the GUIs workings to provide assistance to engineers.
- Created a Financial Dashboard for investors by analyzing company's performance through 15 different KPIs and projecting performance using Power View and Power Pivot on MS Excel.
- Decreased weekly analysis report consolidation time by 80% using Excel Macros to automate consolidation.
- Streamlined e-Invoice transactions between Rolls-Royce India and related entities.

### SCHOOL OF CHEMICAL AND BIOMOLECULAR ENGINEERING, Research Assistant

*Jan'16 – May'16*

- Conducted research under Dr. Elsa Reichmanis focused on synthesis and functionalization of reduced graphene oxide (rGO) transport layers for a perovskite solar cell in order to align bandgaps and increase efficiency output.
- Worked in conjunction with graduate student advisor to synthesize high quality graphene oxide, reduce it using Improved Hummer's Method, and use it as an electron transport layer in the solar cell.
- Tested for best solvents for rGO and characterized quality of reduction using XPS and Raman Spectrometer.

### OFFICE OF DISABILITY SERVICES, GEORGIA TECH, Student Assistant

*Aug'15 – Dec'15*

- Took proper, annotated notes for Materials Science and Engineering Economics classes.
- Charged with sending scanned notes to assist students with disabilities in their academic preparation.

## PROJECTS

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### HYBRID ELECTRIC VEHICLE PROJECT

*Sep'16-Present*

- Part of a 3-member team to predict performance of a 5-seater parallel architecture HEV using simulations developed in MATLAB and Simulink.
- Project requires proper justification of choice of EM and IC engine parameters, battery pack capacity, current ratings etc.
- Requires a cost estimate of each of the components used, and a critical analysis of its performance, including a fuel cost estimate using EPA's UDDS.
- Powertrain layout will be presented using CAD drawings in the chosen chassis.

### CREATIVE DECISIONS AND DESIGN PROJECT

*Jan'15-May'15*

- Designed a search and rescue machine for ME 2110 using CAD, SolidWorks and within QFD guidelines.
- Developed a Risk matrix analysis and House of Quality to analyze customer needs and risks associated with the machine design.
- Used milling, drilling, lathing, and band saw to manufacture the machine and programed it using LabVIEW Software.
- Worked as the team leader to carry out tasks within deadlines, tight engineering constraints and a competitive atmosphere devoting 12+ hours every week.
- Gained experience in presenting technical reports, giving technical presentations, and working cohesively in a team setting.

## SKILLS

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- **SOFTWARE SKILLS:** MATLAB (GUI, Numerical Methods, Curve fitting etc.), Java, Visual Basic, Autodesk AutoCAD, Autodesk Inventor (3-D CAD), MS Office, LabVIEW, Circuit Design and Analysis through NI ELVISmx (myDAQ software)
- **MACHINE RELATED SKILLS:** Drills, Band saw, Lathe, Mill, Robotics (using Pneumatic Actuators, Solenoids, Electronic Sensors), Glove Box, XPS.
- **LANGUAGES:** English – fluent, German (certified at intermediate B1 Level), Hindi – fluent.

## EXTRACURRICULARS

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### ENERGY CLUB, Operations Manager

*Aug'15 – Present*

- Work with the Operations Team to secure club funding by writing proposals and funding pitches to potential investors such as the Georgia Tech Student Foundation, Strategic Energy Institute, Shell and Chevron.
- Previously helped organize 3<sup>rd</sup> Annual Energy Expo at Georgia Tech held on March 3<sup>rd</sup>-4<sup>th</sup> 2016 on a budget of \$15,000.
- Expo's aim was to facilitate dialogue between energy industry representatives and students on the energy climate in the Southeast, future of natural gas, and renewable energy policy of the United States in the 21<sup>st</sup> century.
- Co-organize and participate in weekly Energy Club Chats to present on energy and energy related topics.