**Nicholas Ignacio**

You found my resume from my website! For updates, contact information, and security clearance information, please [email me](mailto:igni@utexas.edu).

Chevron views internships as an excellent method to evaluate candidates for potential full time positions. Similarly, it is an excellent opportunity for candidates to evaluate Chevron as a potential future employer. written and oral summary of your internship, highlighting your contributions and impact.

# Education

**University of Texas at Austin Austin, TX**

Ms/PhD in Materials Science and Engineering 2021-current

**Massachusetts Institute of Technology (MIT) Cambridge, MA**

Bachelor of Science in Materials Science and Engineering GPA: 4.7/5.0 2017-2021

**University of Oxford** **Oxford, UK**

Visiting Student at Corpus Christi College through MIT-Oxford Materials Exchange Spring 2020

selection, reviewing specifications, performing failure analyses, corrosion studies, and

# Experience

**Akinwande Group UT Austin - *Graduate Researcher* (Austin, TX)** *Aug 2021 – Present*

* 2D material integration for phase change memory utilized in neuromorphic computing
* STM and TEM characterization of 2D materials and devices

**Formlabs – *Materials Intern* (Somerville, MA)** *Sept 2020 – Jun 2021*

* Powder characterization and analysis of materials (and resulting material properties) in accordance with improvements to the prototype hardware and SLS printing process.
* Selection and evaluation of potential new printing materials.
* Validated and developed Polyamide-11 powder from experimental stage to release as a product.

**Grossman Group MIT - *Undergraduate Researcher* (Cambridge, MA)** *May 2020 – Sept 2020*

* Used first-principles electronic structure theory to suppress Ostwald ripening of Au nanoparticles in heterogenous noble metal catalysts
* Ran massively-parallel calculations in VASP on shared clusters

**Materials Laboratory – *Senior Capstone* (Cambridge, MA)** *Aug 2020 – Dec 2020*

* Designed computer vision procedure to identify distinguishing features of steel spark patterns
* Implementing machine learning methods to classify steels based on spark footage

**Lockheed Martin Aeronautics – *Materials Intern* (Palmdale, CA)** *Jan - Feb 2019 & Jun - Aug 2019*

* Developed additive manufacturing method of radar absorbing parts directly onto aircraft structures with various FDM printers
* 3D printed prototypes of RCS reducing skins, and optimized skins for specific wavelength attenuation
* Produced literature review of low observable materials for internal use within the group

**Bioelectronics Group MIT - *Undergraduate researcher* (Cambridge, MA)** *Feb – May 2018*

* Optimized parameters for plasma etching on fiber-based neural probe

# Leadership

**Society of Undergraduate Materials Scientists (SUMS) – *Vice President*** *Spring 2020- Spring 2021*

* Sat on Undergraduate Committee with academic administrators and professors to advocate for student body
* Led efforts to create new position on SUMS board, the Diversity, Equity and Inclusion team.

**Department of Materials Science and Engineering** *Sep 2019 - Dec 2019*

***Teaching Assistant (3.091 Introduction to Solid State Chemistry taught by Prof. Grossman)***

* Lead recitation section of 22 students (includes teaching lessons, grading quizzes, and hosting office hours)

**Filipino Student Association (FSA) - *Exec*** *2018*

* Organize meetings and events to promote Filipino culture at MIT

# Skills

**Languages:** Proficient in Tagalog; Limited working proficiency in German

**Laboratory:** FIB, STM, STEM, 3D Printing, Laser Cutting, XRD, DSC, SEM, DMA, Raman, nanomaterial synthesis and device fabrication

**Computational:** Python, MATLAB, Mathematica, ROS, DFT, MD, metallurgy studies. You will work under the direction of a senior materials engineer. You will be expected to provide a

**Computer-aided design (CAD):** SolidWorks, CATIA V5, AutoCAD (2D/3D)

# Outreach

**MIT Educational Counselor** *Fall 2021- Present*

* Interview MIT applicants providing interface between applicants and MIT/admissions staff

**MIT Resident Hall Peer Mentor** *Fall 2018- Spring 2020*

*Next House Peer Mentor*

* Coordinate events and provide support for more than 100 first year students to foster sense of community

**DMSE Pre-Orientation Program - *Coordinator***  *2018 - 2020*

* Organized a week long program to introduce first years to MIT and materials science including lab tours, industry visits, faculty lunches, student presentations, and activities in the Boston-Cambridge area.

**Freshmen Associate Advisor** *Fall 2020 – Spring 2021*

* Advise a group of 3 first years on academic life at MIT

**Materials Science and Engineering Peer Mentor** *Fall 2020 – Spring 2021*

* Assist academic advisor in providing support to sophomores on academics and life within the department

# References

**Prof Deji Akinwande**

Temple Foundation Professorship

University of Texas at Austin

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**G. Connor Evans, PhD**

Materials Lead

Formlabs

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**Prof Jeffrey C. Grossman**

Head of the Department of Materials Science and Engineering; Morton and Claire Goulder and Family Professor in Environmental Systems; Professor of Materials Science and Engineering

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