

EDUCATION

STANFORD UNIVERSITY Doctor of Philosophy in Mechanical Engineering <i>Knight Hennessy Scholar</i> (Three Year Stanford Leadership Fellowship)	Stanford, CA Expected May 2026
STANFORD UNIVERSITY Masters of Arts in Education	Stanford, CA Expected May 2024
UNIVERSITY OF MARYLAND, COLLEGE PARK BS Mechanical Engineering Entrepreneurship and Innovation Honors Program GPA (Cumulative): 3.98/4.00 <i>Banneker Key Scholar</i> (Full Scholarship to the University of Maryland)	College Park, MD Aug 2016 – Dec 2020

RESEARCH EXPERIENCE

STANFORD UNIVERSITY <i><u>Interaction and Design Lab</u> and <u>CHARM Lab</u></i> <u>Advisor</u> : Prof. James Landay and Prof. Allison Okamura • Augmented Reality for Democratizing Education	Stanford, CA June 2021 – Present
UNIVERSITY OF MARYLAND, COLLEGE PARK <i><u>Geometric Algorithms for Modeling, Motion, and Animation Laboratory</u></i> <u>Advisor</u> : Prof. Dinesh Manocha • Telepresence in Virtual Reality	College Park, MD Aug 2020 – Aug 2021
UNIVERSITY OF MARYLAND, COLLEGE PARK <i><u>Bioinspired Advanced Manufacturing (BAM) Laboratory</u></i> <u>Advisor</u> : Prof. Ryan D. Sochol • Additive Folding of PolyJet 3D Printed Components for Microfluidic Applications	College Park, MD Sept 2018 – July 2020
INSTITUTE OF TECHNOLOGY OF CAMBODIA & VILLANOVA UNIVERSITY <i><u>International Research Experience for Students, Cambodia</u></i> <u>Sponsor</u> : <i>National Science Foundation</i> <u>Advisor</u> : Prof. Garrett Clayton • Modular Robotics for Explosive Ordnance Disposal in Cambodia	Phnom Phenh, Cambodia June 2019 – Aug 2019
OREGON STATE UNIVERSITY, CORVALLIS <i><u>Dynamic Robotics Laboratory</u></i> <u>Sponsor</u> : <i>National Science Foundation</i> <u>Advisor</u> : Prof. Jonathan Hurst • Impact Absorption in Dynamic Walking Robots	Corvallis, OR June 2018 – Aug 2018
UNIVERSITY OF MARYLAND, COLLEGE PARK <i><u>Robotics Realization Lab</u></i> <u>Advisor</u> : Prof. Sarah Bergbreiter • Soft Robotics to Model the Human Hand	College Park, MD Jan 2017 – May 2018

JOURNAL PUBLICATIONS

1. **E.H. Childs**, A.V. Latchman, and R.D. Sochol *et al.*, “Additive Assembly for PolyJet-Based Multi-Material 3D Printed Microfluidics,” **Journal of Microelectromechanical Systems**.
2. **E. Childs**,* F. Mohammad,* L. Stevens* and D. Manocha *et al.*, “An Overview of Enhancing Distance Learning Through Augmented and Virtual Reality Technologies,” **IEEE Transactions of Visualization and Computer Graphics**. *These authors contributed equally; listed alphabetically

CONFERENCE PUBLICATIONS

1. A. Cheng, J. Ritchie, N. Agrawal, **E. Childs**, C. DeVeaux, Y. Jee, T. Leon, B. Maples, A. Cuadra, and J. Landay “*Designing Immersive, Narrative-Based Interfaces to Guide Outdoor Learning*” **Human Computer Interaction Conference (ACM CHI) 2023**
2. U. Bhattacharya, **E. Childs**, and D. Manocha *et al.*, “*Speech2AffectiveGestures: Synthesizing Co-Speech Gestures with Generative Adversarial Affective Expression Learning*,” **ACM International Conference on Multimedia (ACMMM)**, 2021

PRESENTATIONS / PANELS

STANFORD XR CONFERENCE	Stanford, CA
Panel Moderator, XR in Education	May 2023
Demonstration, Mobile AR Learning	May 2022

HONORS AND AWARDS

- NSF LSAMP Bridge Scholar
- Academic Achievement Award for highest GPA in Mechanical Engineering
- Amadas Industries Award Recognizing Aptitude for Success in Science, Engineering, and Technology
- National Academy of Engineering Grand Challenge | *Advanced Health Informatics*
 - Awarded 1st Place for Grand Challenge Presentation & 1st Place for Overall Grand Challenge Novelty

ADDITIONAL ENGINEERING EXPERIENCE

LAM RESEARCH CORPORATION	Fremont, CA
Mechanical Engineer, Global Products Engineering	May 2021 – Aug 2021

- Designed HoloLens applications for visualizing industrial robots
- Created UX applications to visualize and diagnose robot errors.

UNIVERSITY OF MARYLAND, COLLEGE PARK	College Park, MD
Bioinspired Robotics	Feb 2019 – May 2019

- Designed robot inspired by summersaulting Moroccan Spider

KEY TECHNOLOGIES, INC	Baltimore, MD
Mechanical Engineer, Medical Technology Engineering Consulting	Sept 2019 – Dec 2019

- Designed, manufactured, and tested for consumer products and medical devices

UNIVERSITY OF MARYLAND, COLLEGE PARK	College Park, MD
Consultant, Quality Enhancement Systems and Teams (Quest)	Oct 2018 – Dec 2018

Sponsor: Unites States African Development Foundation (USADF)

- Consulted for farming cooperative startup in the DRC

GENERAL ELECTRIC AVIATION	Madisonville, KY
Process Engineer, MAD Coating / Vapor Phase Aluminide (VPA) Coating	June 2017 – Aug 2017

- Designed rework programs for turbine blade coating to improve efficiency by over 100%

TECHNICAL SKILLS

- **Engineering Software:** SolidWorks | Arduino Programming | MATLAB | Engineering Equation Solver | C++ | Processing | Creo | NX | Maya | Microsoft Office | Unity | D3
- **Manufacturing:** FDM 3D Printing | Dremel | Belt Sander | Band Saw | Jigsaw | Laser Cutter | Stratasys Objet500 Connex3 (Polyjet 3D Printing) | PDMS (Silicone) Molding