

**EDUCATION**

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<b>STANFORD UNIVERSITY</b> Doctor of Philosophy in Mechanical Engineering <i>Knight Hennessy Scholar (Three Year Stanford Leadership Fellowship)</i>	Stanford, CA Expected May 2026
<b>STANFORD UNIVERSITY</b> Masters of Arts in Education	Stanford, CA Expected May 2025
<b>UNIVERSITY OF MARYLAND, COLLEGE PARK</b> BS Mechanical Engineering   Entrepreneurship and Innovation Honors Program GPA ( <i>Cumulative</i> ): 3.98/4.00 <i>Banneker Key Scholar (Full Scholarship to the University of Maryland)</i>	College Park, MD Aug 2016 – Dec 2020

**RESEARCH EXPERIENCE**

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

**JOURNAL PUBLICATIONS**

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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**

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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

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

## HONORS AND AWARDS

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- NSF LSAMP Bridge Scholar
- Academic Achievement Award for highest GPA in Mechanical Engineering
- 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

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<b>DOLBY LABORATORIES</b>	Sunnyvale, CA
Researcher, <a href="#">Advanced Technology Group</a>	May 2024 – Aug 2024
<ul style="list-style-type: none"> <li>• Investigated immersive technology for learning</li> </ul>	

<b>LAM RESEARCH CORPORATION</b>	Fremont, CA
Mechanical Engineer, <a href="#">Global Products Engineering</a>	May 2021 – Aug 2021
<ul style="list-style-type: none"> <li>• Designed HoloLens applications for visualizing industrial robots</li> <li>• Created UX applications to visualize and diagnose robot errors.</li> </ul>	

<b>UNIVERSITY OF MARYLAND, COLLEGE PARK</b>	College Park, MD
<a href="#">Bioinspired Robotics</a>	Feb 2019 – May 2019
<ul style="list-style-type: none"> <li>• Designed robot inspired by summersaulting Moroccan Spider</li> </ul>	

<b>KEY TECHNOLOGIES, INC</b>	Baltimore, MD
Mechanical Engineer, <a href="#">Medical Technology Engineering Consulting</a>	Sept 2019 – Dec 2019
<ul style="list-style-type: none"> <li>• Designed, manufactured, and tested for consumer products and medical devices</li> </ul>	

<b>UNIVERSITY OF MARYLAND, COLLEGE PARK</b>	College Park, MD
Consultant, <a href="#">Quality Enhancement Systems and Teams (Quest)</a>	Oct 2018 – Dec 2018
<b><u>Sponsor: Unites States African Development Foundation (USADF)</u></b>	
<ul style="list-style-type: none"> <li>• Consulted for farming cooperative startup in the DRC</li> </ul>	

<b>GENERAL ELECTRIC AVIATION</b>	Madisonville, KY
Process Engineer, <a href="#">MAD Coating</a> / Vapor Phase Aluminide (VPA) Coating	June 2017 – Aug 2017
<ul style="list-style-type: none"> <li>• Designed rework programs for turbine blade coating to improve efficiency by over 100%</li> </ul>	

## TECHNICAL SKILLS

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- **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