

EDUCATION

STANFORD UNIVERSITY Doctor of Philosophy in Mechanical Engineering <i>Knight Hennessy Scholar</i> (Three Year Stanford Leadership Fellowship) <i>Impact Labs PhD Fellowship</i> (Fellowship for solutions-oriented research)	Stanford, CA Expected May 2027
STANFORD UNIVERSITY Masters of Arts in Education	Stanford, CA Expected May 2025
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>Interaction and Design Lab</i> and <i>CHARM Lab</i> Advisor: Prof. James Landay and Prof. Allison Okamura • Augmented Reality for Democratizing Education	Stanford, CA June 2021 – Present
UNIVERSITY OF MARYLAND, COLLEGE PARK <i>Geometric Algorithms for Modeling, Motion, and Animation Laboratory</i> Advisor: Prof. Dinesh Manocha • Telepresence in Virtual Reality	College Park, MD Aug 2020 – Aug 2021
<i>Bioinspired Advanced Manufacturing (BAM) Laboratory</i> Advisor: Prof. Ryan D. Sochol • Additive Folding of PolyJet 3D Printed Components for Microfluidic Applications	Sept 2018 – July 2020
INSTITUTE OF TECHNOLOGY OF CAMBODIA & VILLANOVA UNIVERSITY <i>International Research Experience for Students, Cambodia</i> <i>Sponsor: National Science Foundation</i> Advisor: Prof. Garrett Clayton • Modular Robotics for Explosive Ordnance Disposal in Cambodia	Phnom Phenh, Cambodia June 2019 – Aug 2019
OREGON STATE UNIVERSITY, CORVALLIS <i>Dynamic Robotics Laboratory</i> <i>Sponsor: National Science Foundation</i> Advisor: Prof. Jonathan Hurst • Impact Absorption in Dynamic Walking Robots	Corvallis, OR June 2018 – Aug 2018
UNIVERSITY OF MARYLAND, COLLEGE PARK <i>Robotics Realization Lab</i> Advisor: 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

AUGMENTED WORLD EXPO Panelist, The Educational Rift in Spatial Reasoning	Longbeach, CA June 2024
STANFORD XR CONFERENCE Panel Moderator, XR in Education Demonstration, Mobile AR Learning	Stanford, CA May 2023 May 2022

HONORS AND AWARDS

- NSF LSAMP Bridge Scholar
- Academic Achievement Award for highest GPA in Mechanical Engineering
- MIT Reality Hack: 1st Place: Best Use of Looking Glass

ADDITIONAL ENGINEERING EXPERIENCE

DOLBY LABORATORIES Researcher, Advanced Technology Group <ul style="list-style-type: none">• Investigated immersive technology for learning	Sunnyvale, CA May 2024 – Aug 2024
LAM RESEARCH CORPORATION Mechanical Engineer, Global Products Engineering <ul style="list-style-type: none">• Designed HoloLens applications for visualizing industrial robots• Created UX applications to visualize and diagnose robot errors.	Fremont, CA May 2021 – Aug 2021
UNIVERSITY OF MARYLAND, COLLEGE PARK Bioinspired Robotics <ul style="list-style-type: none">• Designed robot inspired by summersaulting Moroccan Spider	College Park, MD Feb 2019 – May 2019
KEY TECHNOLOGIES, INC Mechanical Engineer, Medical Technology Engineering Consulting <ul style="list-style-type: none">• Designed, manufactured, and tested for consumer products and medical devices	Baltimore, MD Sept 2019 – Dec 2019
UNIVERSITY OF MARYLAND, COLLEGE PARK Consultant, Quality Enhancement Systems and Teams (Quest) <u>Sponsor: Unites States African Development Foundation (USADF)</u> <ul style="list-style-type: none">• Consulted for farming cooperative startup in the DRCmedical devices	College Park, MD Oct 2018 – Dec 2018

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