CHAITANYA GAIKWAD

Product Designer and Engineer

+1 445 208 2333
chaitanyagaikwad06@gmail.com
Portfolio: www.thechaitanyahypothesis.com
https://in.linkedin.com/in/chaitanyagaikwad06

EDUCATION

MASTER OF SCIENCE, INTEGRATED PRODUCT DESIGN

University of Pennsylvania
GPA: 4.00/4.00
July 2021 - Present (expected May 2023)

BACHELOR OF TECHNOLOGY MECHANICAL ENGINEERING

Vishwakarma Institute of Technology, Pune University,
CGPA: 9.23/10 | Aug 2014 - May 2018

SKILLS

Software: SolidWorks, CATIA V5, NX CAD, Keyshot, Rhino, Figma, ANSYS Workbench, Abaqus, Unity, Adobe Creative Cloud, Creo.
Prototyping 3D: Milling, Lathe, Welding, 3D printing; **2D:** Laser cut, Waterjet;
Electronics: Arduino, PCB Design.
Programming: C, MATLAB, HTML/CSS, Python.
Certifications: Interaction Design Specialization (Coursera - UC, San Diego | Prof. Scott Klemmer) (User Research, Ideation Interviewing, Need Finding, Prototyping, Design of Experiments)
Languages: Fluent - English, Hindi, **Native** - Marathi, German-A1 level (90/100)

SCHOLASTIC ACHIEVEMENTS

- **Undergraduate Thesis Project**
  - **Winner** Forbes Marshall Best Project Award for best Bachelor's project.
  - **Rank 2/1120** at AAKRUTI-2018 (Product Design competition) held by SolidWorks - Dassault Systemes.
  - **Rank 2/60** at ABHIKALP-2018 (Product Design competition) held by Design Innovation Centre - University of Pune.
- **J N Tata Scholar**
- **Sakal India Foundation Scholarship**

ACTIVITIES

TEACHING EXPERIENCE

- Volunteered to teach Science and Mathematics to 9th and 10th grade students at Hutatma Balveer Shirishkumar government school.
- Taught undergraduate students CATIA and ANSYS softwares in SAE workshop.

EXTRACURRICULAR

- **Sports:** College cricket team. First Driver - Team Veloce Racing.
- **Mentor:** College K-Yantra team (2017-18)

EXPERIENCE

PRODUCT DEVELOPMENT ENGINEER

Translead Medtech Pvt Ltd, Bangalore | December 2019 - June 2021

- Drove development of the Stand at Ease assistive chair from concept generation to prototyping and technical execution for the compliant hinge mechanism used in the Stand at Ease assistive chair. Was awarded $100,000 amount in funding for further concept development.
- Defined the materials and manufacturing processes by speaking to manufacturers and suppliers. Conducted iterative design process (prototyping and testing), DFM analysis, BOM preparation, and cost analysis.
- Conducted User Interviews with 2 geriatricians and 8 patients to understand their needs to align UX and ID during development process.

RESEARCH ASSISTANT

M2D2 Lab, Indian Institute of Science, Bangalore | July 2019 - June 2021

- Designed and conducted experiments to quantify the assistance (observed 30-60% reduction in human effort) provided by the Stand at Ease assistive chair. System was designed to measure muscle activation and knee torque using electromyography sensors, 3D motion capture, and force platform hardware systems.
- Used Visual 3D and Matlab software for collecting, processing, and analyzing biomechanics data collected from users for sit-to-stand and stand-to-sit actions while using assistive chair.

RESEARCH ASSISTANT

Biomechanics Lab, Indian Inst of Science, Bangalore | June 2018 - June 2019

- Designed and developed a planar miniature biaxial stretcher to perform live-cell imaging under microscope to examine changes in cell morphology due to external loading. Patent Pending. Application Number: 202041056145
- Modified the fluid shear device developed in the lab to reduce vibrations, weight and cone wobble. Designed systems for precise height adjustment and monitoring environmental conditions inside the bioreactor chamber.
- Publication: Paddillaya N, Ingale K, Gaikwad C, Saini DK, Pullarkat P, Kondaiah P, Menon GI, Gundiah N, Cell adhesion strength and tractions are mechano-diagnostic features of cellular invasiveness, Soft Matter, Royal Society of Chemistry, 2022 (Submitted).

RAPID ORGANIC WASTE COMPOSTER

Undergraduate Thesis Project, VIT, Pune | September 2017 - April 2018

- Designed and developed a low-cost, automated portable composter for rapid composting of household organic kitchen waste.
- Integrated software and hardware to control environmental conditions within the composting chamber to achieve 70-80% reduction in process time.

TEAM VELOCE RACING

Formula Student Racing(FSAE) team, VIT, Pune | Aug 2015 - June 2018

- Administration Role: Captain of 40-45 members team at three national level formula student events. Co-authored Design Report and core team member for Business Presentation.
- Vehicle Dynamics and Design Lead:
  - Used MATLAB and Simulink for tire modelling and optimization of the suspension system to improve vehicle performance.
  - Designed and manufactured wheel assembly and suspension system. 30% weight reduction achieved by performing topology optimization and FEA.
  - Fabricated space frame tubular chassis while minimizing distortion during welding with inhouse developed innovative jigs and fixtures (Sub-team: 7 members).
  - Developed an in-house manufacturing facility to fabricate carbon fiber parts (Sub-team: 6 members).