

# Pranav Muppirishetty

## Human-Technology Interaction Researcher

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SUMMARY I am a Human-Technology Interaction researcher with a background in product design, biomedical and mechanical engineering, and cognitive science. I take pride in my creativity, tenacity and adaptability to solve interesting problems. My main interests include human - AI interaction, healthcare technology and psycho-physiology. I am also an amateur musician, digital artist and a photographer.

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EDUCATION **Human Technology Interaction, MSc** Sep 2018 - Feb 2021  
Eindhoven University of Technology (**TU/e**), Eindhoven, The Netherlands  
Distinction: With Great Appreciation  
Grade: 8.0 on a scale of 10

**Engineering Design, Dual Degree, M.Tech & B.Tech** Aug 2012 - July 2017  
Indian Institute of Technology, Madras (**IIT Madras**), Chennai, India  
Specialization: Biomedical Design  
Grade: 8.26 on a scale of 10

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HONORS & PUBLICATIONS

- **Patent published** - 1369/CHE/2015 for a novel automatic gear transmission system.
- Recipient, **Amandus H. Lundquist Scholarship Program (ALSP)** and **Holland Scholarship 2018** - awarded to students admitted in TU/e masters program with prior academic excellence.
- Presented a position paper on the importance of mental-health research involving technological interventions during the CUI workshop at **CSCW-2020** conference.

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RESEARCH & PROFESSIONAL EXPERIENCE **Hybrid Teacher (*Part-time*), TU Eindhoven** Sep 2021 - Present  
*Artifice Squad, Future-Everyday Group, Industrial Design Department*

- Conducting workshops on design and development of Artificially intelligent conversational agents.
- Providing feedback and support for bachelors and masters students' projects.
- **Skills** : Prototyping, Teaching, Conversation design, Programming.

**Research Assistant, TU Eindhoven** Mar 2021 - Jun 2021  
*Future-Everyday Group, Industrial Design Department*

- Investigating various interaction paradigms between chatbots and mental health of users.
- Designed chatbots for open-ended conversations using the boost.ai platform.
- **Skills** : Experiment design, Data Analysis, Conversation design.

**Masters Thesis Project** Apr 2020 - Feb 2021  
**Investigating the effect on self-compassion due to multiple interactions with a gender-ambiguous voice user interface that provides or asks for care**  
*Supervisors: Prof. Dr. Wijnand Ijsslesteijn\*, Minha Lee (PhD)\**  
*\*Human Technology Interaction Group, TU/e*

- Investigated relationship between role of a gender-ambiguous voice assistant and its impact on perceived loneliness and self compassion.
- Employing the Computers Are Social Actors (CASA) paradigm to enable the participants **to learn self compassion** by teaching a voice assistant.
- Conducted the experiment single-handedly with a mixed design for **161** participants.
- **Skills:** Experiment Design, Data Analysis (STATA), Dialogflow, Python, HTML, CSS, Angular

## Physiological Synchrony and Empathy

Sep 2019 - Feb 2020

*Supervisor: Prof. Dr. Joyce Westerink*

*Human Technology Interaction Group, TU/e*

- Investigated relationship between communicating physiological synchronization as feedback and its impact on empathy experienced by a pair of participants.
  - Conducted an experiment with between subject design for **138** participants.
  - Used Mobi devices to collect ECG data and calculate heart rate synchronization.
  - **Skills:** Experiment Design, Data Analysis (STATA)
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PRODUCT DESIGN  
EXPERIENCE

## Boozy Brain - AI cocktail dispenser

Nov 2018 - Jan 2019

*Supervisor: Dr. Emilia Barakova*

*Assistant Professor of Socially Intelligent Systems, TU/e*

- Designed and developed an intelligent cocktail dispenser that suggests a cocktail mix based on available drinks and classifies the chosen cocktail mix.
- Implemented a **Naive Bayes classifier** trained on an online cocktail recipe database.
- **Skills:** Machine Learning, Python, Arduino

## Primal Skin

Oct 2016

*Lexus Design Awards 2017 submitted entry*

*Mentor: Ms. Deepthi Zachariah, Principal Architect & Founder, Revolution By Design*

- Designed a material that explores the concept of making emotions tangible.
- Followed the **Human-centered design** approach rigorously to design a material that can be employed in the domain of fashion technology.
- Developed a dynamic material that embodies emotions and responds instantaneously based on physiological signals in the body.
- **Skills:** Human-centered design, Material Engineering

## Design Engineering Intern at Philips HIC, India

Dec 2015 - Jun 2016

*Supervisor: Mr. Shailesh Agrahari,*

*Director, R&D Leader Mobile Diagnostic X-Ray*

- Developed a **Camera based repositioning guidance system** to be used with Philips mobile C-Arms.
- Designed the **UI inspired by video games** to help guide the technician in repositioning.
- Interviewed surgeons, surgical technologists and application specialists to understand the workflow and determine design parameters.
- **Skills :** C++, Qt (UI Design), UX Research

## Virtual Percussion Gloves

July 2013 - Feb 2014

*a.k.a. Virtual Tabla*

*Self Project*

*Center for Innovation, IIT Madras*

- Developed gloves to simulate hand-played membranophones.
  - Programmed the system involving flex and ultrasonic sensors.
  - Placed runner-up in **DAAD Science Slams** (2014) for presenting the Virtual Tabla.
  - Performed as part of The Virtual Band, showcased at Shastra's ENVISAGE (India's largest student organized Techno-Cultural show).
  - **Skills:** Arduino, Python, PCB Design (Eagle).
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ART PROJECTS &  
EXHIBITS

**Expeditie Spinvis**

2019

*TU/e, Eindhoven, NL*

- Contributed as a student collaborator in the Dutch musician Spinvis' search for relationship between beauty and science which led to the creation of the film 'Beauty by definition'.
- Performed in a live impromptu musical band alongside Spinvis that accompanied the screening of the movie.

**Grow, away sooner**

2017

*3rd place, Reciprocity fest, Kalakshetra, Chennai, India*

- Created an artwork with a team of artists in order to voice against food wastage which secured 3rd place out of 20 contestants.
- The art work was entirely created out of recycled materials and plants.

**Good girl project**

2017

*Government school, Chennai*

- Conducted a workshop in collaboration with artist Parvathi Nayar on Women's day in order to playfully query into the preset 'good girl' in the minds of young girl students.
- Developed a software tool which gives the user an experience of holding a wireless paint brush and lets them paint on a big screen.
- This workshop was **sponsored by the US Embassy**.

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LANGUAGE SKILLS

- English (Fluent), Telugu (Native), Hindi (Fluent), Dutch (Basic) and Japanese (Basic).

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REFERENCES

**Prof. Dr. Joyce Westerink**

Principal Scientist at Philips Research  
Chair of Wellbeing & Psychophysiology,  
Human-Technology Interaction Group,  
Eindhoven University of Technology (TU/e).  
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**Prof. Dr. Wijnand Ijsselsteijn**

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Human-Technology Interaction Group,  
Eindhoven University of Technology (TU/e).  
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**Asst. Prof. Dr. Minha Lee**

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