

# Tya Chuanromanee

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## EMPLOYMENT HISTORY

### Graduate Research Assistant | 08/2018 - Present

University of Notre Dame | Notre Dame, IN

- Conduct and analyze semi-structured interviews to inform design of a health application
- Create and evaluate paper and digital prototypes
- Design and implement Mechanical Turk experiments to evaluate cognitive biases
- Design and conduct user studies and participatory design workshops
- Oversee students and lead professional development meetings
- Built a mobile breathing visualizations tool and performed usability testing to evaluate its effectiveness

### Graduate Teaching Assistant | 08/2018 – 05/2019

University of Notre Dame | Notre Dame, IN

- Grade Programming Paradigms daily assignments, in-class exercises, and projects
- Hold regular office hours for students
- Act as a liason between professor and students

### Undergraduate Research Assistant | 06/2017 – 08/2018

Kettering University | Flint, MI

- Wrote and implemented image analysis techniques including Elliptical Fourier Descriptors and landmark analysis in Matlab
- Wrote and utilized data analysis scripts including principal component analysis using Matlab
- Set up and managed version control system and project timeline using Git and Github
- Wrote and updated technical documentation for users and developers

### Peer Tutor | 10/2016 – 06/2018

Kettering University | Flint, MI

- Supported students' academic progress through individual and group tutoring
- Focused on computer science subjects as well as calculus, chemistry, physics, and computer engineering
- Obtained Level 2 Tutor certification from College Reading and Learning Association

### Software Engineer Co-op | 01/2016 – 03/2017

Robert Bosch, LLC | Plymouth, MI

- Wrote and supported customer and internal scripts in Python, Perl, and VBA
- Tested embedded software modules in ASCET Database using code coverage analysis
- Implemented CERT analysis system for project-wide security assessment

### Test and Validation Co-op | 07/2015 – 09/2015

Robert Bosch, LLC | Novi, MI

- Identified and documented bugs in automotive infotainment systems
- Validated bug fixes
- Tested navigation systems for customer (General Motors) both in car and on bench
- Went on testing trips with customer to locate and verify bugs

- Worked with customers to ensure that bugs were resolved quickly
- Wrote and improved technical documentation

## EDUCATION

### PhD: Computer Science | 08/2017 – 06/2023

University of Notre Dame | Notre Dame, IN

Overall GPA: 3.909

Research Area: Human-Computer Interaction

Advisor: Ronald Metoyer

### BSCS: Computer Science, Economics Minor | 10/2015 – 06/2018

Kettering University | Flint, MI

Overall GPA: 3.95, Dean's List

Summa Cum Laude

Upsilon Pi Epsilon Computer Science Honor Society, Member

Thesis: *Diagnostic Assistance Software for Mental Healthcare Providers*, Pass With Distinction

### Mechanical Engineering Major | 09/2014 – 05/2015

Milwaukee School of Engineering | Milwaukee, WI

Overall GPA: 3.91

Dean's List

## SKILLS

### Programming Languages

Python, JavaScript, C, Java, MATLAB, SQL, Haskell, Perl, VBA

### Website Development

HTML, CSS, PHP, JavaScript (D3.JS, Vue.JS), MySQL, Bootstrap, Django, Drupal, Wordpress

### Software

Atlas.TI, Saturate, Figma, Zeplin, Android Studio, Windows and Linux operating systems, Git, Microsoft Office Suite, MATLAB App Designer, SolidWorks, Adobe Photoshop, Intuit QuickBooks

### Machine Learning

RNN, CNN, Keras, Theano; Sampling and training data; Network design and architecture

### Data Collection and Analysis

Open Coding, Affinity Diagramming, Participatory Design, User Interviews, Observations

### Teaching and Tutoring

Computer Science: Computing and Algorithms I-III, Programming Paradigms, Operating Systems, Web Software, Functional Languages

Computer Engineering: Digital Systems, Microcomputers I-II

Mathematics: Calculus I-III, Differential Equations

## PUBLICATIONS

**Chuanromanee, T.,** Zhi, Q., Metoyer, R. 2021. Visualization May Amplify Confirmation Bias: Crowdsourced Studies From Non-Experts in Two Domains. In Preparation.

**Chuanromanee, T. &** Metoyer, R. 2021. Transgender People's Technology Needs to Support Health and Transition. In Preparation.

**Chuanromanee, T.** Designing for Trans Temporalities. In Preparation.

**Chuanromanee, T. & Metoyer, R.** (2020). Evaluation and Comparison of Four Mobile Breathing Training Visualizations. 2020 International Conference on Healthcare Informatics. Forthcoming.

Metoyer, R., **Chuanromanee, T.**, Girgis, G. M., Zhi, Q., & Kinyon, E. (2020). Supporting Storytelling with Evidence in Holistic Review Processes: A Participatory Design Approach. Proceedings of the ACM on Human-Computer Interaction, 4(1).

**Chuanromanee, T. S.**, Cohen, J. I., & Ryan, G. L. 2019. Morphological Analysis of Size and Shape (MASS): An integrative software program for morphometric analyses of leaves. Applications in Plant Sciences, e11288.

## ORAL PRESENTATIONS

MASS: a tool for Morphological Analysis of Size and Shape of leaves. Oral presentation at the Michigan Academy of Science, Arts, and Letters, Central Michigan University, Mount Pleasant, MI, March 9, 2018.

Quantitative Analysis of Leaf Shape. Oral presentation at the Kettering Department of Physics Seminar Series, Kettering University, Flint, MI, August 18, 2017.

## POSTER PRESENTATIONS

Evaluation and Comparison of Usability of Four Mobile Breathing Training Visualizations. Poster presentation at the CRA URMD Grad Cohort Workshop, Computing Research Association, Waikoloa, HI, March 22, 2019.

MASS: a tool for Morphological Analysis of Size and Shape of leaves. Poster presentation at Kettering University Homecoming Poster Session, Kettering University, Flint, MI, May 17, 2018.

Quantitative Analysis of Leaf Shape. Poster presentation at the Research Experience for Undergraduates Poster Session, Kettering University, Kettering University, Flint, MI, August 17, 2017.

## HONORS AND AWARDS

Travel Scholarship | Tapia Conference | 2020

LASER Fellow | University of Notre Dame | 2020 – 2021

Tapia 2019 Travel Grant | AccessComputing | 2019

CRA URMD Travel Grant | Computing Research Association | 2019, 2020

GEM Associate Fellow | The National GEM Consortium | 2019 – 2020

James and Eileen Simon Graduate Fellowship | University of Notre Dame | 2018 – 2019

Outstanding Thesis Award | Kettering University | 2018

President's Medal | Kettering University | 2018

Bio REU Travel Grant | Rocky Mountain Biological Laboratory | 2018

Donald Miles Memorial Scholarship | Kettering University | 2017 – 2018

Kettering Merit Scholarship | Kettering University | 2015 – 2018

Presidential Scholarship (Full Tuition) | Milwaukee School of Engineering | 2014 – 2015

Siemens Merit Scholarship | Siemens | 2014 – 2018

Discus Awards Honorable Mention | Discus Awards | 2013

## SERVICE

Content Contributor | Irish 4 Reproductive Health | 2020 – present

External Reviewer | IEEE ISEC TPC | 2019

LGBTQ Focus Group Member | University of Notre Dame Office of Student Affairs | 2019

Disabled Student Focus Group Member | University of Notre Dame Office of Student Affairs | 2019

Receptionist | The LGBTQ Center | 2018 – present

Event Assistant | The LGBTQ Center | 2018 – present

Treasurer | Amazing Grace Counseling Outreach | 2012 – 2019

## **PROFESSIONAL DEVELOPMENT AND CERTIFICATIONS**

URMD Grad Cohort Participant | Computing Research Association | 2019, 2020

Striving for Excellence in College and University Teaching | University of Notre Dame Kaneb Center for Teaching and Learning | 2018

Responsible Conduct of Research | CITI Program | 2017

Level 2 Certified Tutor | College Reading & Learning Association | 2017

## **PROFESSIONAL MEMBERSHIPS**

Member | Association for Computing Machinery

Member | ACM SIGCHI

Member | Society for Applied and Industrial Mathematics

Member | Upsilon Pi Epsilon

## **REFERENCES AVAILABLE ON REQUEST**