

Mingtong Zhang

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EDUCATION

**Carnegie Mellon University,
School of Computer Science**
Masters of Education
Technology & Applied
Learning Science
(METALS)
Aug. 2019, Pittsburgh, PA

Beijing Normal University
Bachelor in Educational
Technology
July 2018, Beijing, China

SKILLS

Programming
Java, C++, JavaScript, C

Instruction Design
Cognitive Task Analysis,
Backward Curriculum Design,
E-Learning Course Design,
Affinity Diagramming,
Storyboarding,
Prototyping,
Course Evaluation

Languages
Chinese (native),
Japanese (fluent, Japanese-
Language Proficiency Test
N1, which is the highest level)

Tools

Data Analysis
Matlab, SPSS, Weka,
LightSide

Design
Cognitive Tutor Authoring
Tool (CTAT), Open Learning
Initiative (OLI), Figma,
Sketch, Miro

COURSEWORK

E-Learning Design
Tools for Online Learning
Educational Statistics
Multimodal Affect Computing
Applied Machine Learning

PROJECTS

Háblame (A Spanish Instruction Platform) Pittsburgh, PA
Content Lead for the Project, Houghton Mifflin Harcourt as Client Jan. - Aug. 2019
A platform for interactive videos as materials for foreign language learning, especially Spanish, as part of the HMH world language program

- Researched local Spanish classes and nationwide Spanish textbooks to find pain points for Spanish learning
- Designed the content of the Spanish learning video, conducted its shooting and editing, and aligned it with ACTFL standards

Emotion Analysis of Children and Elders Pittsburgh, PA
Course Project for Multimodal Affect Computing Feb. - May 2019
A multimodal machine learning model and its findings about the emotional difference between young and aged learners with certain stimuli

- Conducted the psychological research, determined the training set for the algorithm, proposed hypothesis based on the research
- Led annotations to build a new dataset of video clips of people with various emotions to train a convolutional neural network
- Conducted statistical analysis on the dataset and parameters in the trained model, summarized the findings in a team-working paper which is to be published in ACM International Conference on Multimodal Interaction (ICMI 2019)

Cognitive RST Online Tutor Pittsburgh, PA
Course Project for Personalized Online Learning Oct. - Dec. 2018
An intelligent E-learning online tutor to instruct students about Rhetorical-Structure Theory (RST, a theory in NLP for making annotations)

- Created and refined a system of knowledge components about RST to help divide and conquer the entire task
- Conducted Cognitive Task Analysis (CTA), and improved the tutor prototype in several rounds of iterations with user testing
- Developed the designed tutor using JavaScript and Nools

Tame the Heat (A High School Interdisciplinary Curriculum) Beijing, China
For the Second STEM+ Innovative Education Academic Seminar Mar. - May 2017
An 8th grade interdisciplinary science course covering physics, chemistry and biology

- Researched standards regarding each subject involved in the course, aligned the knowledge components with standards
- Designed activities to incorporate knowledge components from three subjects into one course
- Edited the advertising for the curriculum, introduced it to Beijing Chaoyang Elementary school, and it was selected by the school

EXPERIENCE

Science Teacher Internship Beijing, China
Chaoyang Elementary School attached to Beijing Normal University Mar.- May 2017

- Managed a 4th grade class and taught them science
- Designed a science activity guide book for science class activities

High School Part-Time Tutor Beijing, China
Beijing Normal University Tutor Association Oct. 2014 – Mar. 2017

- Designed and implemented customized physics instruction for an individual learner during her last year before college entrance examination and helped her enter a top-notch university in Beijing
- Received training at Beijing Normal University Tutor Association
- Tutored senior high school level English and Physics for 2 years