

# Xinhe Zhang

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## EDUCATION

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### Carnegie Mellon University

*M.S. in Electrical and Computer Engineering; GPA: 4.0/4.0*

Courses: *Introduction to Machine Learning for PhD, Introduction to Deep Learning, Neural Signal Processing, Information Theory*

Pittsburgh, PA

*Aug 2019 - Expected Dec 2020*

### Carnegie Mellon University

*B.S. in Electrical and Computer Engineering with University and College Honors; GPA: 3.68/4.0*

Courses: *Deep Reinforcement Learning and Control, Natural Language Processing, Fundamentals of Control*

Pittsburgh, PA

*Aug 2014 - May 2018*

## SKILLS SUMMARY

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**Languages** Python, Javascript, Kotlin, C/C++

**Tools** PyTorch, TensorFlow, D3.js, WebGL, React, Redux, Angular, Express, Flask, AWS

## WORK EXPERIENCE

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### Carnegie Mellon University

*Teaching Assistant and CRLA Certified Level II: Advanced Tutor*

- Organized review sessions and office hours for 100 students and graded their works.

Pittsburgh, PA

*Feb 2015 - Current*

### Guangdong 999 Brain Hospital

*Assistant to the Dean*

- Participated in brain cancer case discussions and assisted the associate dean with technology purchasing decision-making.

Guangdong, China

*Jul 2019 - Aug 2019*

### Duolingo, Inc

*Android Developer*

- Collaborated with product and design teams to develop Duolingo on Android.
- Collaborated with the China team to implement Android push notification in China.

Pittsburgh, PA

*Nov 2018 - May 2019*

### Expaii, Inc

*Engineer Intern*

- Collaborated with the content team to improve SEO results as the sole engineer.

Pittsburgh, PA

*Aug 2018 - Nov 2018*

### Facebook, Inc

*Software Engineer Intern*

- Designed and implemented a web app in React, GraphQL and PHP with user-specified parameters that can query from databases and collectively display the results.

Seattle, WA

*May 2018 - Aug 2018*

### Google, Inc

*Software Engineer Intern*

- Designed an data visualization tool and improved the frontend filtering method in Angular and D3.js for about 150 business and engineer monthly users.

Mountain View, CA

*May 2017 - Aug 2017*

*Engineering Practicum Intern*

- Implemented a C++ backend server and served it to visualize geospatial data.
- Created an interactive web display of 3d geospatial data with WebGL and Maps API.

*May 2016 - Aug 2016*

## ACADEMIC PROJECTS

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### Diabetic Retinopathy Detection with Deep Learning

Designed a pipeline that first captured the underlying domain knowledge from retina fundus images and then performed the grading classification task.

### Training Deep Network with Synthetic Images

Used the Carla simulator and Autodesk Maya to create synthetic images of objects in road scenes and trained a deep network to detect objects in real images with these synthetic ones.

### Second Language Acquisition Modeling with Deep Learning

Given a history of token-level errors made by the learner in the learning language (L2), experimented a series of deep learning models to predict the errors they will make in the future.

### Time-Space-Aware Memory for Deep Reinforcement Learning

Experimented on approaches towards improvements of memory structures for reinforcement learning.

### Question Generating and Answering System

Generated questions and answers from given texts with natural language processing models.

## LEADERSHIP

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### CMU Innovation and Entrepreneurship Association

*Co-President*

Pittsburgh, PA

*May 2017 - Aug 2018*

### IEEE-Eta Kappa Nu Honor Society

*Corresponding Secretary, Sigma Chapter*

Pittsburgh, PA

*May 2017 - Aug 2018*