

Zhanwen Chen

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Education

University of Virginia

PH.D. IN DATA SCIENCE

- Advisor: Dr. Sheng Li
- Relevant courses:

> Probability and Stochastic Processes > Machine Learning

Charlottesville, VA

Aug. 2022 - Present

University of Georgia

PH.D. IN COMPUTER SCIENCE

- Advisor: Dr. Sheng Li
- GPA: 3.92
- Relevant courses:

> Advanced Representation Learning > Database Management Systems
> Algorithms > Operating Systems

Athens, GA

Aug. 2021 - Aug. 2022

Vanderbilt University

M.S. IN COMPUTER SCIENCE (THESIS TRACK)

- Thesis: Noise Suppression in Ultrasound Beamforming Using Convolutional Neural Networks
- Advisor: Dr. Maithilee Kunda
- Area: Intelligent Systems

Nashville, TN

Jan. 2018 - Dec. 2019

Vassar College

B.A. IN ECONOMICS; MINOR IN COMPUTER SCIENCE

Poughkeepsie, NY

Aug. 2012 - Dec. 2016

Publications

More Knowledge, Less Bias: Unbiasing Scene Graph Generation with Explicit Ontological Adjustment

ZHANWEN CHEN, SAED REZAYI, SHENG LI

WACV, Waikoloa, Hawaii

Jan 2023

Characterizing Datasets for Social Visual Question Answering, and the New TinySocial Dataset

ZHANWEN CHEN, SHIYAO LI, ROXANNE RASHEDI, XIAOMAN ZI, MORGAN ELROD-ERICKSON, BRYAN HOLLIS, ANGELA MALIAKAL, XINYU SHEN, SIMENG ZHAO, AND MAITHILEE KUNDA

IEEE ICDL-EpiRob, Valparaíso, Chile

Oct. 2020

Compact Convolutional Neural Networks for Ultrasound Beamforming

ZHANWEN CHEN, ADAM LUCHIES, BRETT BYRAM

IEEE IUS 2019, Glasgow, UK

Oct. 2019

Other Conferences

Towards a New Technology-based Theory of Mind Intervention for Adolescents on the Autism Spectrum

ROXANNE RASHEDI, MANDY ZI, SHIYAO LI, CHRIS KETCHUM, ZHANWEN CHEN, CHRISTINE KIM, TENGYU MA, MAITHILEE KUNDA

Vanderbilt Kennedy Center Science

Day, Nashville, TN

September, 2019

Research Experience

RISE Lab (PI: Dr. Sheng Li), University of Georgia & University of Virginia

GRADUATE RESEARCH ASSISTANT

- Have been researching on the problem of Scene Graph Generation (under Computer Vision) and submitted a conference paper
- Have been serving as a peer reviewer for journals and conferences including AAAI, CVPR, ECCV, ACL, TNNLS, TPAMI, and TCSVT.
- Co-developed the lab website <https://riseai.github.io/> with Github Actions

Athens, GA & Charlottesville, VA

Aug. 2021 - Present

AIVAS Lab (PI: Dr. Maithilee Kunda), Vanderbilt University

GRADUATE RESEARCH ASSISTANT (PART-TIME, 10 HRS/WEEK)

- Developed an automated crowdsourcing pipeline with Python, HTML/CSS, JavaScript, and AWS Mechanical Turk
- Developed a logic production system to model social question answering using Python and Prolog
- Created a video Q&A dataset to teach social skills to high school students on the autism spectrum and train AI systems

Nashville, TN

Sep. 2018 - Dec. 2019

BEAM Lab (PI: Dr. Brett Byram), Vanderbilt University

Nashville, TN

GRADUATE RESEARCH ASSISTANT (PART-TIME, 10 HRS/WEEK)

Mar. 2018 - Dec. 2019

- Implemented a machine learning pipeline to suppress noise in ultrasound beamforming in the frequency domain with PyTorch and SciPy
- Developed a novel method to conduct random neural architecture search (NAS) with Prolog constraint satisfaction
- Analyzed neural networks' effect on beamforming and ultrasound imaging quality with Python (Jupyter Notebook)
- Developed an evaluation (A/B test) pipeline for experts to rank ultrasound images using Pandas and jsPsych

Work Experience

University of Georgia

Athens, GA

GRADUATE TEACHING ASSISTANT FOR CSCI 3360: DATA SCIENCE

Jan. - May 2022

- Taught two classes on data processing with Pandas DataFrames and plotting with Matplotlib
- Co-developed all homework assignments
- Graded homework assignments
- Answered student questions during and outside of TA office hours

University of Georgia

Athens, GA

GRADUATE TEACHING ASSISTANT FOR CSCI 4300: WEB PROGRAMMING SECTION

Aug. - Dec. 2021

- Presented concepts and examples of full-stack web development projects in three lectures
- Developed the final project and several homework assignment on full-stack web development
- Supervised web development labs
- Graded homework, quizzes, and final assignment
- Answered student questions during and outside of TA office hours

Vanderbilt Institute for Clinical and Translational Research

Nashville, TN

APPLICATION DEVELOPER (FULL-TIME, 40 HRS/WEEK)

Jul. 2020 - Present

- Developed Java, Shell, and SQL applications for data ETL pipelines to support research projects in Natural Language Processing, Computer Vision, and medical research
- Designed cloud architectures on Microsoft Azure to migrate existing data pipelines

Basil Systems Inc.

Nashville, TN

FULL-STACK DEVELOPER AND DATA SCIENTIST (FULL-TIME, 40 HRS/WEEK)

Jan. 2020 - Jul. 2020

- Developed a faceted search feature using Python, NodeJS, ReactJS, and AWS ElasticSearch
- Developed a data ingest pipeline with Python, MongoDB, MySQL, and AWS SQS/S3/ElasticSearch
- Used Agile Methodology (Jira Scrumban) and CD/CI (CircleCI) checks in Github repositories
- Sourced and analyzed public regulatory datasets from the FDA and other HHS agencies with Python (Jupyter Notebook)

Five Colleges Inc.

Amherst, MA

WEB DEVELOPER (FULL-TIME, 40 HRS/WEEK)

Jun. 2017 - Dec. 2017

- Developed and maintained web applications to support online educational programs
- Developed a Drupal frontend tool using NodeJS to batch create data types and view templates
- Created a DOM crawler using Python and JavaScript to inventory assets

Pitney Bowes Inc.

Shelton, CT

SOFTWARE ENGINEERING INTERN (FULL-TIME, 40 HRS/WEEK)

Jun. 2016 - Aug. 2016

- Developed an API endpoint to deserialize and store event XML data from PB products around the globe using C# and Microsoft SQL Server
- Developed a configuration application that sets up Wi-Fi connections between PB mail printers and tablets using REST APIs, C#, and Java

Pitney Bowes Inc.

Danbury, CT

COMMODITY SPECIALIST INTERN (FULL-TIME, 40 HRS/WEEK)

Jun. 2015 - Aug. 2015

- Created an automated vendor data collection pipeline with a proprietary compliance database software

Nestlé Waters North America

Stamford, CT

IS/IT INTERN (FULL-TIME, 40 HRS/WEEK)

Jun. 2014 - Aug. 2014

- Developed a data analytics pipeline that automated sourcing, staging, visualization, and regressions using Microsoft SQL Server, SSIS, and R

Online Courses & Certificates

Microsoft Certified: Azure Fundamentals

Certificate

MICROSOFT

Nov 2020

Natural Language Processing Nanodegree

Online Course

UDACITY

July 2020

Full Stack Web Developer Nanodegree

Online Course

UDACITY

May 2017

Professional Services

CVPR 2022 **Reviewer**, The Conference on Computer Vision and Pattern Recognition (CVPR)
AAAI 2023 **Reviewer**, AAAI Conference on Artificial Intelligence (AAAI)
ECCV 2022 **Reviewer**, European Conference on Computer Vision (ECCV)
ACL 2022 **Reviewer**, Annual Meeting of the Association for Computational Linguistics (ACL)
SDM 2022 **Reviewer**, SIAM International Conference on Data Mining (SDM)
Since 2021 **Reviewer**, IEEE Transactions on Circuits and Systems for Video Technology (TCSVT)
Since 2021 **Reviewer**, IEEE Transactions on Neural Networks and Learning Systems (TNNLS)

Professional Associations

Since 2014 **Student Member**, The Institute of Electrical and Electronics Engineers (IEEE) - Computer Society (CS)
Since 2016 **Student Member**, Association for the Advancement of Artificial Intelligence (AAAI)
Since 2014 **Student Member**, Association for Computing Machinery (ACM)

Scholarships, Prizes, and Honors

Aug. 2019 **Recipient**, Vanderbilt University Graduate Student Travel Grant to Present Research *Nashville, TN*
Jul. 2016 **Recipient**, Inroads Scholarship Award *Hartford, CT*
Dec. 2015 **Finalist**, Vassar College Concerto Competition for Soloists *Vassar College*
Mar. 2015 **3rd Place**, Area Contest, Toastmasters International Speech Contest *Poughkeepsie, NY*

Extracurricular Activity

Repre Repo

EDITOR

- Publish and edit technical articles on my Medium blog publication that focuses on Computer Science and applications

Medium

08/2019 - Present

Vanderbilt Robotics Competition Team

MEMBER

- Implemented autonomous navigation software for our team's competition robot with Java, C++, and ROS

Vanderbilt

01/2018-05/2019

Programming Skills

Programming Languages Python, JavaScript, Matlab, C#, Java, Prolog, Shell, SQL, MongoDB, C, C++, \LaTeX

Tools and Framework AWS, Linux, Flask, ROS, TensorFlow, PyTorch, Keras, OpenCV, NumPy, Jupyter, NodeJS, ReactJS, ElasticSearch

SDLC Tools Assembla, Jira, Git, Confluence, CircleCI