

# Yue Guo

Mobile: (+1)443-525-1807 | Email: [yguo50@uw.edu](mailto:yguo50@uw.edu)

Interests: Natural language processing, machine learning, and their applications in medical domain

## EDUCATION AND TRAINING

---

<b>University of Washington</b> <i>Ph.D. in Biomedical &amp; Health Informatics: Advanced Data Science</i>	Seattle, WA 2019 - present
<b>Johns Hopkins Hospital</b> <i>Postdoctoral Research Fellow</i>	Baltimore, MD 2018 - 2019
<b>Johns Hopkins University</b> <i>Master of Health Science in Epidemiology</i>	Baltimore, MD 2016 - 2018
<b>Capital Medical University</b> <i>M.B.B.S. in Preventive Medicine</i>	Beijing, China 2011 - 2016

## RESEARCH EXPERIENCE

---

<b>Research Assistant</b> with Trevor Cohen <i>University of Washington School of Medicine</i>	09/2018 - present
<ul style="list-style-type: none"><li>• Using deep neural networks to identify Alzheimer patients from transcripts of cognitive task</li><li>• Using machine learning models to identify Goals of Care discussion in clinical notes</li></ul>	
<b>Postdoctoral Research Fellow</b> with Todd MucNutt <i>Johns Hopkins Hospital, Radiation Oncology Department</i>	06/2018 - 08/2019
<ul style="list-style-type: none"><li>• Developed an outcome-based treatment planning optimization algorithm and added it as a feature in the Treatment Planning software</li><li>• Built a RT induced xerostomia prediction model based on spatially dependent radio-morphologic dose feature using ridge regression</li><li>• Managed Oncospace dataset and created online questionnaires in Mosaic</li></ul>	
<b>Research Assistant</b> with Sarah Szanton <i>Johns Hopkins University School of Nursing</i>	09/2017 - 06/2018
<ul style="list-style-type: none"><li>• Conducted user interview and developed an interactive website prototype for evaluation data collection by Axure</li></ul>	
<b>Research Assistant</b> with Avonne Connor <i>Johns Hopkins University Bloomberg School of Public Health</i>	03/2017 - 06/2018
<ul style="list-style-type: none"><li>• Conducted a case-control study to investigate the relationship between SNAPs in ALDH1A1 polymorphisms and the risk of breast cancer in different alcohol consumption categories using multinomial logistic regression in STATA</li></ul>	
<b>Research Assistant</b> with Youlin Qiao <i>Cancer Institute &amp; Hospital, Chinese Academy of Medical Sciences and Peking Union Medical College</i>	08/2015 - 06/2016
<ul style="list-style-type: none"><li>• Collected data from 1300 participants via in-person interviews from 6 villages in Xinmi, Henan province, and controlled the quality of data</li></ul>	
<b>Research Assistant</b> with Yanxia Luo <i>Capital Medical University</i>	09/2015 - 05/2016
<ul style="list-style-type: none"><li>• Performed conditional logistic regression analysis in the time-stratified case-crossover study using SAS and R</li></ul>	

## PUBLICATIONS

---

### Peer-Reviewed Articles

- **Yue Guo**, Changye Li, Carol Roan, Serguei Pakhomov, Trevor Cohen. *Crossing the 'Cookie Theft' Corpus Chasm: Applying what BERT Learns from Outside Data to the ADReSS Challenge Dementia Detection Task*. *Frontiers in Computer Science*, 2021
- **Yue Guo**, Wei Qiu, Yizhong Wang, Trevor Cohen. *Automated Lay Language Summarization of Biomedical Scientific Reviews*. 35th AAAI conference in Artificial Intelligence, 2021
- Yu-Cong Li, Yu-Qian Zhao, Ting-Yuan Li, Wen Chen, Guang-Dong Liao, Hai-Rui Wang, Hai-Ke Lei, **Yue Guo**, Qi Zhou. *The Performance of Immunocytochemistry Staining as Triaging Tests for High-Risk HPV-Positive Women: A 24-Month Prospective Study*. *Journal of Oncology*, 2020
- **Yue Guo**, Wei Jiang, Pranav Lakshminarayanan, Xuan Hui, Peijin Han, Zhi Cheng, Michale Bowers, Ilya Shpitser, Sauleh Siddiqui, Russell H Taylor, Harry Quon, Todd McNutt. *Spatial radiation dose influence on xerostomia recovery and its comparison to acute incidence in head neck cancer patients*. *Advances in Radiation Oncology*, 2020
- Peijin Han, Pranav Lakshminarayanan, Wei Jiang, Ilya Shpitser, Xuan Hui, Sang Ho Lee, Zhi Cheng, **Yue Guo**, Russ Taylor, Sauleh Siddiqui, Michael Bowers, Khadija Sheikh, Junghoon Lee, Harry Quon, Todd McNutt. *Dose/Volume histogram patterns in Salivary Gland subvolumes influence xerostomia injury and recovery*. *Scientific Reports*, 2019
- Feng-qi Luo, **Yue Guo**, Yi-fei Lu, Yue Zhang, Qi Gao, Hui-ping Zhu. *Association between sleep and agricultural injuries among peach farmers during harvest time in Pinggu District, Beijing, China*. *Injury Medicine Magazine*, 2016

### Presentations

- **Yue Guo**, Pranav Lakshminarayanan, Peijin Han, Khadija Sheikh, Zhi Cheng, Wei Jiang, Michael Bowers, Sauleh Siddiqui, Ilya Shpitser, Russell H Taylor, Harry Quon, Todd McNutt. *The feasibility of outcome-based treatment planning strategy to improve xerostomia symptom in head and neck cancer patients*. *International Journal of Radiation Oncology, Biology, Physics*, 2019
- **Yue Guo**, Zhi Cheng, Emily Cecil, Pranav Lakshminarayanan, Yifei Lu, Peijin Han, Ana Kiess, Todd McNutt, Harry Quon. *Evaluation of Patient vs. Provider Based Assessments of Xerostomia and Dysphagia Compared Against Weight Loss in the Irradiated Head and Neck Cancer Patient*. *International Journal of Radiation Oncology Biology Physics*, 2019
- Zhi Cheng, Khadija Sheikh, Pranav Lakshminarayanan, Wei Jiang, Peijin Han, **Yue Guo**, Emily Cecil, L Sloan, Ana Kiess, Brandi Page, Junghoon Lee, Harry Quon, Todd McNutt. *Voxel Dose Pattern for Patient-Reported Dysphagia Among Head and Neck Cancer Patients Receiving Definitive Radiotherapy*. *International Journal of Radiation Oncology Biology Physics*, 2019
- Matthew Deek, Emily Cecil, L Sloan, Zhi Cheng, Peijin Han, Khadija Sheikh, Chengcheng Gui, **Yue Guo**, Pranav Lakshminarayanan, C Fakhry, W Koch, CG Gourin, M Tan, W Mydlarz, NC Schmitt, Todd McNutt, Brandi Page, Ana Kiess, J Richmon, Harry Quon. *Definitive Management of Early Stage Oropharyngeal Carcinoma: A Comparison of Long Term Outcomes Following Transoral Surgery or Definitive Chemoradiation*. *International Journal of Radiation Oncology Biology Physics*, 2019
- Brandi Page, **Yue Guo**, Peijin Han, Zhi Cheng, J. Harkness, C. Shen, Amanda Choflet, Chen Hu, Emily Cecil, Xuan Hui, Nicole Schmitt, I. Shpitser, Ana Kiess, Todd McNutt, and Harry Quon. *Quality of Life differences in Male and Female Patients with Head and Neck Cancer* *Scientific reports*, 2018
- Peijin Han, Pranav Lakshminarayanan, W Liang, I Shpitser, Xuan Hui, Sang Ho Lee, Zhi Cheng, **Yue Guo**, Russell Taylor, Sauleh Siddiqui, Michael Bowers, Khadija Sheikh, Junghoon Lee, Harry Quon, Tidd McNutt. *Head and Neck Salivary Gland Spatial Dose-Volume histogram (DVH) Patterns Predict Radiation-Induced Xerostomia, From Injury to Recovery*. *Medical Physics*, 2018

## TECHNICAL SKILLS

---

**Programming Languages:** Python, Java, SQL, R, SAS, L<sup>A</sup>T<sub>E</sub>X

**Scientific Toolkits:** PyTorch, TensorFlow, Gluon

**Designer Tools:** Axure, Adobe XD

## COMPUTER SCIENCE COURSES

---

CSE 517 Natural Language Processing with Noah Smith    CSE 546 Machine Learning with Kevin Jamieson

CSE 583 Software Development for Data Scientists with David Beck    CSE 373 Data Structure and Algorithm with David Beck