

# Yuping Shao

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## Education

### Worcester Polytechnic Institute

PHD ELECTRICAL COMPUTER ENGINEERING

Worcester, MA

Jan 2021 -

### Georgia Institute of Technology

MS COMPUTER SCIENCE

Atlanta, GA

Aug 2015 - Dec 2017

### Colorado State University

BS ELECTRICAL COMPUTER ENGINEERING

Fort Collins, CO

Aug 2003 - May 2008

## Experience

### ACADEMIC

#### VISLab Worcester Polytechnic Institute

PHD STUDENT

Worcester, MA

Jan 2021 -

- Supervised by Ziming Zhang. Topics: pointcloud, deep learning, optimization, visual recognition.
- Currently 1st author CVPR submission under review

### INDUSTRY

#### Clinical Data Animation Center

DATA SCIENTIST

Boston, MA

Mar 2018 - Nov 2020

- Part of solving sepsis collaboration between MGH, Emory and UCSD.
- Developed realtime clinical informatics on predictive sepsis algorithm as the technical lead.

#### Clinical Data Animation Center

DATA ENGINEER

Boston, MA

Aug 2016 - Mar 2018

- Part of neuro critical care and infectious disease control collaboration at MGH.
- Developed scalable waveform data storage for bedside/eeg signal and database for clinical informatics as the technical lead.

#### Boulder Environmental Sciences and Technology

SOFTWARE/SYSTEM ENGINEER

Boulder, CO

Feb 2014 - May 2015

- Developed embedded system software control for UAV radiometry.

#### Spectra Logic

SOFTWARE/SYSTEM ENGINEER

Boulder, CO

Jul 2009 - Jul 2013

- Developed high-level hardware/system/software for robotics manufacturing business unit.

#### Woodward Governors

SOFTWARE/SYSTEM ENGINEER

Fort Collins, CO

May 2008 - Apr 2009

- Developed control system protocol analyzer for greybox testing.

## Publications

### PUBLISHED

1. Bucklin, A. A., Ganglberger, W., Quadri, S. A., Tesh, R. A., Adra, N., Da Silva Cardoso, M., Leone, M. J., Krishnamurthy, P. V., Hemmige, A., Rajan, S., Panneerselvam, E., Paixao, L., Higgins, J., Ayub, M. A., Shao, Y.-P., Ye, E. M., Coughlin, B., Sun, H., Cash, S. S., ... Westover, M. B. (2022). High prevalence of sleep-disordered breathing in the intensive care unit - a cross-sectional study. *Sleep & Breathing = Schlaf & Atmung*. <https://doi.org/10.1007/s11325-022-02698-9>
2. Ganglberger, W., Velpula Krishnamurthy, P., Quadri, S., Tesh, R., Bucklin, A., Adra, N., Cardoso, M., Leone, M., Hemmige, A., Rajan, S., Panneerselvam, E., Paixao, L., Higgins, J., Ayub, M., Shao, Y.-P., Coughlin, B., Sun, H., Ye, E., Cash, S., & Westover, M. B. (2021). *Sleep in the intensive care unit through the lens of breathing and heart rate variability: A cross-sectional study*. <https://doi.org/10.1101/2021.09.23.21264039>
3. Shenoy, E., Rosenthal, E., Shao, Y.-P., Biswal, S., Ghanta, M., Ryan, E., Suslak, D., Swanson, N., Moura Junior, V., Hooper, D., & Westover, M. B. (2018). Real-time, automated detection of ventilator-associated events: Avoiding missed detections, misclassifications, and false detections due to human error. *Infection Control & Hospital Epidemiology*, 39, 1–8. <https://doi.org/10.1017/ice.2018.97>

4. Mukerji, S. S., Das, S., Alabsi, H., Brenner, L. N., Jain, A., Magdamo, C., Collens, S. I., Ye, E., Keller, K., Boutros, C. L., Leone, M. J., Newhouse, A., Foy, B., Li, M. D., Lang, M., Anahtar, M. N., Shao, Y.-P., Ge, W., Sun, H., ... Westover, M. B. (2021). Prolonged intubation in patients with prior cerebrovascular disease and COVID-19. *Frontiers in Neurology*, 12. <https://doi.org/10.3389/fneur.2021.642912>
5. Shashikumar, S. P., Wardi, G., Paul, P., Carlile, M., Brenner, L. N., Hibbert, K. A., North, C. M., Mukerji, S. S., Robbins, G. K., Shao, Y.-P., Westover, M. B., Nemati, S., & Malhotra, A. (2021). Development and prospective validation of a deep learning algorithm for predicting need for mechanical ventilation. *Chest*, 159(6), 2264–2273. <https://doi.org/https://doi.org/10.1016/j.chest.2020.12.009>
6. Sun, H., Jain, A., Leone, M. J., Alabsi, H. S., Brenner, L. N., Ye, E., Ge, W., Shao, Y.-P., Boutros, C. L., Wang, R., Tesh, R. A., Magdamo, C., Collens, S. I., Ganglberger, W., Bassett, I. V., Meigs, J. B., Kalpathy-Cramer, J., Li, M. D., Chu, J. T., ... Westover, M. B. (2020). CoVA: An Acuity Score for Outpatient Screening that Predicts Coronavirus Disease 2019 Prognosis. *The Journal of Infectious Diseases*, 223(1), 38–46. <https://doi.org/10.1093/infdis/jiaa663>
7. Zafar, S., Rosenthal, E., Jing, J., Bordbar, E., Kassa, S., Tabaeizadeh, M., Nour, H. A., Sun, H., Javed, F., Edhi, M., Gallagher, J., Ghanta, M., Shao, Y.-P., Shoukat, M., Ge, W., Cole, A., & Westover, M. (2020). 36: BURDEN OF EEG ICTAL-INTERICTAL CONTINUUM ACTIVITY PREDICTS POOR OUTCOME IN CRITICALLY ILL PATIENTS. *Critical Care Medicine*, 48(1).
8. Tabaeizadeh, M., Nour, H. A., Shoukat, M., Sun, H., Jin, J., Javed, F., Kassa, S., Edhi, M. M., Bordbar, E., Gallagher, J., Moura, V., Ghanta, M., Shao, Y.-P., Cole, A. J., Rosenthal, E. S., Westover, M. B., & Zafar, S. F. (2020). Burden of epileptiform activity predicts discharge neurologic outcomes in severe acute ischemic stroke. *Neurocritical Care*, 32, 697–706.
9. Shenoy, E. S., Rosenthal, E. S., Biswal, S., Ghanta, M., Ryan, E. E., Shao, Y.-P., Suslak, D., Swanson, N., Valdery, M. J., Hooper, D. C., & Westover, M. B. (2017). Real-Time Automated Surveillance for Ventilator Associated Events Using Streaming Electronic Health Data. *Open Forum Infectious Diseases*, 4(suppl\_1), S633–S633. <https://doi.org/10.1093/ofid/ofx163.1681>

## Teaching

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### Worcester Polytechnic Institute

GRADUATE TEACHING ASSISTANT

Worcester, MA

Jan 2021 -

2021 SP **ECE545/CS545**: Digital Image Processing

2022 SP **ECE545/CS545**: Digital Image Processing

2021 FA **ECE579**: Machine Learning for Engineers

2022 FA **ECE579**: Machine Learning for Engineers

### Worcester Polytechnic Institute

REU GRADUATE RESEARCH MENTOR

Worcester, MA

Summer 2021

- Data science for neuroscience research mentor. The team won poster award at MIT Undergraduate Research Technology Conference.

## Service

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- Served as peer reviewer for *ICCV*, *IEEE TPAMI*, *NeurIPS*, and *TMLR*
- Served as reviewer for capstone projects for WPI Electrical Computer Engineering Dept.
- Organizer & workshop leader Mass. General Hospital Dept. of Neurology Clinical Data Animation Center

## Talks

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### Clinical Data Animation Center

CLINICAL INFORMATICS WORKSHOP SERIES

Boston, MA

Sep, 2018

- A series of 4 workshops on clinical SQL timeseries, data warehouse, NLP, and rule-based query.

### Clinical Data Animation Center

BIG DATA ANALYTICS IN HEALTHCARE

Boston, MA

Jan, 2018

- Spark queries for structured EHR data and big data machine learning algorithms for EEG.