# SHI, GONGYI

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https://koichishi.github.io/
https://github.com/koichishi/

## Education

- University of Toronto - St. George Campus                    Toronto, ON, Canada
  - 2017.9 – Present: H.B.Sc. in Computer Science and Statistics with 4.0/4.0 Major GPA
  - GPA 3.9/4.0 in both Computer Science and Statistics courses
  - New College Council In-Course Scholarship $2,000, highest distinction
  - 2020 Dean's List Scholar

## Research and Activities

- Predicting Preconditioner for PCG using Machine Learning       2021.05 – Present
  - Study on learning the preconditioner for conjugate gradient solver using machine learning models under the supervision of Prof. David Levin and Prof. Shinjiro Sueda.
  - Implement the machine learning prototype in Python.
  - Optimize SVD and PCG algorithms and analyze the corresponding residuals and convergences.
- Thinking Outside of the Lab: VR Size & Depth Perception in the Wild       2020.10
  - Studied on remote VR size and depth perception under the supervision of Prof. Karan Singh, Dr. Rahul Arora and Jiannan Li in the Dynamic Graphics Project lab at University of Toronto.
  - Designed and implemented the VR experiment prototype.
  - Introduced the gamification strategy and intrinsic motivation in pilot study and the large-scale crowd-sourced remote experiment.
  - Led literature research on the topics of VR perception and crowd-sourced experiment.
- ASA Datafest 2020                                                    2020.06
  - Trained RoBERTa NLP model for time series analysis to classify sentiment on how the U.S. public responds to breaking news during the COVID-19 pandemic on Twitter.
  - Applied multiple machine learning models (e.g. RoBERTa, GloVe, etc.) for text embedding.
  - Cooperated to construct the overall model architecture and validation test.
  - Obtained Honorable mentions.

## Work Experiences

- Echoworx | Software Automation Framework Developer       2020.09 – 2021.06
  - Developed and maintained the customized automation testing framework.
  - Automated the testing procedures, boosting the efficiency by more than ten times.
  - Investigated the application and reported more than a hundred test failures.
  - Integrated certification auto-generation and uploaded into the automation testing server
- Conceptualiz | iOS Software Developer                       2020.11 – 2021.03
  - Oversaw dependency updates for the deprecated 3D surgery planning application.
  - Worked on application release and testing on iOS devices

## Technical Skills and Interests

- **Technical Skills:** Proficient in C, Python, JavaScript, Java, C#, MATLAB, Bash, Git, Selenium, Unity, Anaconda, VS Code, IDE
- **Interests:** Fitness, Muay Thai, Kendo, Brazilian Jiu-Jitsu