Yunkai **Wang**

Software Developer · Software Engineer

Ottawa, ON

+1 (613) 890-6018 | yunkaiwang1996@gmail.com | yunkaiwang | yunkaiwang

Education

Carleton University — *Ottawa, ON*

M.C.S. Computer Science — *Jan. 2020 - Current*

- Research in Computational Geometry. GPA: 11.4/12. Expected June 2021.
- **Select courses:** Statistical and Syntactic Pattern Recognition, AI-enabled Software Verification and Testing, Algorithms for Data Science.

B.C.S. Computer Science — *Sep. 2014 - Jun. 2019*

- Algorithms Stream with Minor in Mathematics. GPA: 11.67/12.
- **Select courses:** Object-Oriented Software Engineering, Abstract Data Types and Algorithms, Operating Systems, Artificial Intelligence, Neural Networks, Database Management Systems, Real-Time Concurrent Systems, Design and Analysis of Algorithms, Linear Algebra, Calculus.

Skills

Languages	Python, Java, C, C++, JavaScript (Node.js, React), SQL, HTML
Platforms	AWS, Linux (Ubuntu), Windows, Mac
Technologies	Git, Scikit-learn, Tensorflow, React Native, EC2 instance, Eclipse, Visual Studio Code

Experience

Open Source Integration Developer — *Ottawa, ON*

Blindside Network Inc. — *May. 2018 - Aug. 2018*

- Installed and integrated BigBlueButton with Zimbra and OpenEdx to manage entire activities at one spot and improve online learning process.

Java Developer — *Ottawa, ON*

Espial Group Inc. — *Sep. 2016 - Dec. 2016*

- Collaborated in an Agile team; maintained and upgraded containerized applications; executed automated tests for app efficiency enhancement.

Additional experience as **Programmer** and **Teaching Assistant** at Carleton University.

Projects

Smart Snake — *Carleton U.*

`github.com/yunkaiwang/SmartSnake` — *2018*

- Established an AI technique to play simple board games and analyzed the limitation of the technique.
- Evolving neural network with genetic algorithm with randomly initialized parameters to serve as the initial population.

TFTP File Transfer System — *Carleton U.*

`github.com/yunkaiwang/TFTPFileTransferSystem` — *2018*

- A fully-functional file transfer system implemented based on the TFTP specification; implemented using Java.

Retrieve — *Carleton U.*

`github.com/Jasonjys/retrieve` — *2017*

- A lost-and-found mobile app developed using React Native and deployed in the iOS system.
- Created and applied chat functionality; implemented EC2 server for managing search and chat requests.

JESB, Jira to ElasticSearch Bridge — *Espial*

- **Technologies:** Elastic Search, Kibana, Node.js, QATF (Quality Automated Test Framework)
- Enabled automatic generation of team statistics and store these data in Elastic Search; implemented using Node.js.

Smart 2048

Carleton U.

`github.com/yunkaiwang/Smart2048` *2018*

- **Technologies:** Processing, Neural Network, Genetic Algorithm
- An implementation of the 2048 game using Processing.
- Automatically train the neural network to play the 2048 game using genetic algorithms.

Judging a book by its title

Carleton U.

`github.com/yunkaiwang/Smart2048` *2018*

- **Technologies:** Scikit-learn, Tensorflow, Keras, Numpy, Matplotlib
- Applied convolutional neural networks for categorizing books based on their titles; acquired 66% validation accuracy using pre-trained GloVe embeddings; investigated the limitations of MLP models for NLP-related tasks.

Publications

2021 **Simple Linear Time Algorithms For Piercing Pairwise Intersecting Disks,** A. Biniaz, P. Bose, Y. Wang. *WADS*

2018 **A Proposed Method for Designing Diagnostic Mathematics Tests,** K. Cheung, B. Stevens, Y. Wang. *eJMT*