Yuya Jeremy Ong

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Education

THE PENNSYLVANIA STATE UNIVERSITY (2015 - 2019)
GPA: 3.5, B.S. Data Sciences, State College, PA

Technical Skills

LANGUAGES
C, C++, C#, Java, Scala, HTML, JavaScript, CSS, XML, PHP, SQL, Python, R, Matlab, Lua

FRAMEWORKS
MySQL, JQuery, OpenCV, SimpleCV, Point Cloud Libraries, LAMP Stacks, AngularJS, Parse, Theano, Keras, Chainer, PyTorch, Hadoop, Spark, NoSQL, SystemML, Cloudant, Docker, D3.js, SystemML, Unity

HARDWARE
Raspberry Pi, Arduino, Kinect, Google Glass, Leap Motion, Amazon Echo, Microsoft Hololens, Oculus Rift, Fingo

SPECIALIZED SKILLS AND INTERESTS
Big Data, Machine Learning, Deep Learning, Data Science, Computer Vision, Data/Text Mining, Natural Language Processing, Cloud Computing, Microservices

Publications

Ong, Y., Qiao, M., Routray, R., Raphael, R., "Context-aware Data Loss Prevention for Cloud Storage Services", in Proceedings of ***the IEEE International Conference on Cloud Computing (CLOUD)***, 2017 (to appear).

Patents

Context Aware Sensitive Information Detection (***Patent Pending***)

Work Experience

LIONS CENTER - CYBERSECURITY RESEARCH LABORATORY (May 2017 - Present)
Undergraduate Research Assistant, Penn State, University Park, PA
- Researching methods for detecting malware using Machine Learning and Deep Learning methods using malware signature information.

IBM, ALMADEN RESEARCH CENTER (May 2016 - Aug 2016)
Research Intern, Cloud System Analytics Group, San Jose, CA
- Researched, developed and delivered a model based analytics engine utilizing Deep Learning and Natural Language Processing methods for precise, dynamic and context-aware sensitive content detection for the hybrid cloud.
- Won best poster award for internal company wide poster competition.
- Work was presented at IBM World of Watson 2017 Conference.
- Filed Patent Disclosure: ***Context Aware Sensitive Information Detection*** (ARC8-2016-0069)
- Paper accepted to IEEE CLOUD 2017 Conference (***To Appear***)

NITTANY DATA LABS (Feb 2016 - Present)
President & Head Data Scientist, Penn State, University Park, PA
- Worked on applied Big Data and Machine Learning Projects.
- Developed a full hands-on curriculum and training material to train members on fundamental Python, Data Science, Machine Learning and Deep Learning skills.
- Managed club logistics and led weekly meeting agenda and materials.

THE INTELLIGENT INFORMATION SYSTEMS RESEARCH LABORATORY (Sep 2015 - Present)

Undergraduate Research Assistant, Penn State, University Park, PA

- Research to design and develop algorithms to infer human emotions through analysis of subtle body language using Machine and Deep Learning, and Data Analysis techniques.
- Developed novel feature representational framework for building a hybrid emotion representation method between discrete and continuous representations.
- Curated large-scale "emotions in the wild" data set of YouTube videos.

WESTUDEE (Jan 2015 - Jan 2016)

CTO, Chief Architect and Head Developer

- Member of the Board of Managers driving the overall business strategy and direction.
- Oversaw the design and development of the collaboration tool for finding study partners.
- Drove and managed design, development and execution of the platform.

MIT-LEMELSON INVENTEAM (2013 - 2014)

Lead Technology Architect and Developer, Tenafly, NJ

- Led the team to win the MIT-Lemelson InvenTeam competition grant to develop a wristwatch tracking system and prototype for use by early onset Alzheimer's patients.
- Built a data driven predictive system to detect anomalies in patient behavior.
- Presented Project at MIT's annual EurekaFest: https://www.youtube.com/watch?v=NwHx9h2GKn8

SQUEAKY WHEEL MEDIA, INC. (Summer, 2012)

Sr. Developer, Summer Intern, New York City, NY

- Performed highly advanced web design, development, creative work, maintenance and quality-assurance checks.
- Delivered excellent quality work on security vulnerability fixes, resolution to challenging system issues, cross language work using Japanese and Korean, highly advanced HTML, CSS, JS, SQL and PHP code.

Projects

AREV - Augmented Reality Embedding Visualization (January 2016 - Present)

- Implementation of a Hololens based data visualization platform and data science workflow for visualizing and working with datasets using gesture based interaction with the hololens.
- Experimented and implemented pipeline for data analytics platform which communicates between the Hololens and the remote computing server.

Deep Learning Music Composition (June 2016)

- Implemented an experimental ensemble architecture for end-to-end music composition/generation for lyrics, melody and chord progressions using LSTM architecture.

LOGOS - Decentralized P2P Deep Learning Architecture (Jan 2016 - August 2016)

- Researched and developed a decentralized architecture for training Deep Learning models across a cluster of network of nodes of CPU and GPUs to reduce computational processing times.
- Designed and implemented a decentralized distribution channel using blockchain technologies for data sets, neural network topologies and pretrained models to make scalable collaborative online batch learning easier.

Strato - Cloudless Distributed Computing Architecture (Nov 2016 - Jan 2016)

- Built an experimental distributed computational architecture where each node performs a distributed microtask routine on the front end with Javascript.
- Implemented a job distribution server to equally distribute tasks over a TCP network and capture results in a central parameter server.
- Implemented MapReduce and Downpour Stochastic gradient descent models over approximately 30 nodes.