PONGSAKORN U-CHUPALA, Ph.D.

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EDUCATION

Nara Institute of Science and Technology
Nara, Japan (2013-2018)

- Doctor of Engineering, Computer Science, Graduate School of Information Science (GPA: 4.00)
- Master of Engineering, Computer Science, Graduate School of Information Science (GPA: 4.00)

Kasetsart University
Bangkok, Thailand (2008-2013)

- Bachelor of Engineering, Computer Engineering, *Cum Laude* (GPA: 3.54)

AWARDS AND QUALIFICATIONS

- 990 Points, TOEIC IP, June 2015
- 101 Points, TOEFL iBT, October 2012
- Level N3, Japanese Language Proficiency Test, September 2012
- "Good" Rank, The 1st POSN National Computer Olympiad Competition, 2005

EXPERIENCE

2018-present	• Research Engineer at Core System Development Department, R&D Center, Sony Corporation, Japan
2017	• Internship at Information Technology Research Institute, AIST, Japan
2014	• Visiting Scholar at CalIT2, University of California San Diego, United States
2013	• External Researcher at HPCNC Laboratory, Kasetsart University, Thailand • Developer at Innovative Extremist Co., Ltd.
2012	• Google Student Ambassador SEA, Google Inc. • Outsourced Developer for Onebit Matter Co., Ltd. • Outsourced Developer for Diversition Co., Ltd.
2011	• Exchange Student in FrontierLab@OsakaU Program, Osaka University, Japan
2009-2010	• Part-time Developer at Thoth Media Co., Ltd. (now Thoth Zocial Co., Ltd.)

SCHOLARSHIPS

- MEXT Scholarship *(2015-2018)*
- JASSO Scholarship *(2011-2012)*

AFFILIATIONS

- PRAGMA Student Steering Committee *(2015-2018)*
- Software Design and Analysis Laboratory *(2013-2018)*
- Google Developer Group Thailand *(2012-present)*
- Cybermedia Center, Osaka University *(2011-2012)*
- High Performance Computing and Networking Center, Kasetsart University *(2010-2013)*

SKILLS

- Web Technology and Web Development
- Computer Networking
- Software-Defined Networking and OpenFlow
- HPC, Cluster Computing and Virtual Cluster
- Cloud Computing
- Virtualization and Linux Containers (including Docker)
- Linux Administration
- Data Science and Big Data Analysis
- Machine Learning (including Deep Learning with Tensorflow and NNabla)
- Programming Languages (ordered by proficiency): Python (including Django), C++, PHP, JavaScript
- Languages: Thai (Native), English (Business Proficiency), Japanese (Limited Proficiency)

LINKS

- Portfolio: puchupala.com
- Github: github.com/KnightBaron
- LinkedIn: linkedin.com/in/puchupala
- ORCID: orcid.org/0000-0002-8952-661X

NOTABLE PROJECTS

- **NNabla** *(2018)*: Sony's MPI-based high-performance deep learning framework. Responsible for distributed learning performance optimization.
- **GaineViz** *(2017)*: Web-based visualization tool for Gainesville city's open-data. Best hack award, CENTRA2 Student Hackathon.
- **Applying Deep Learning to Network Traffic Identification and Categorization** *(2016-2018):* The CAIDA Internet traffic dataset is analyzed with stacked denoising autoencoder implemented with TensorFlow. A part of the development an automatic network enhancing cycle with application-aware routing. Also, a part of Creative and International Competitiveness Project (CICP2016) supported by NAIST.
- **Container Rebalancing** *(2015-2017):* A novel scheduling mechanism with a rebalancing processing working alongside a scheduling process. A Hadoop/Hive-powered data processing technique and a Python-based simulation using Google's cluster data is performed to validate this method.
- **PRAGMA-ENT** *(2014-2018)*: Breakable international SDN testbed for PRAGMA community. Shared administration responsibility over multiple sites including NAIST, Osaka University, University of California San Diego, and University of Florida.
- **Overseer: Application-Aware Routing** *(2013-present)*: OpenFlow controller for bandwidth and latency aware routing implemented with POX.
- **PRAGMA Boot** *(2013-2014)*: A program to instantiate VM in PRAGMA's cloud. Responsible for OpenNebula plugin written in Ruby.
- **eCOStamp** *(2013-2014)*, Electronics collectible stamp platform combining web service, smartphone application and 3D-printed Arduino-based hardware. Part of Creative and International Competitiveness Project (CICP2013) supported by NAIST.
- **Nyanlive** *(2013)*: A complete solution for creating and maintaining video streaming platform. Responsible for streaming authentication/authorization system and the internal API implemented with Django.
- **ByteArk** *(2013)*: S3-compatible SEA-based CDN. Part of the team responsible for the internal API.
- **Knowbita** *(2013)*: Online lecture archive of dept. of computer eng., Kasetsart University. Responsible for the internal API implemented with Django.
- **OBVOC** *(2012)*: Social media monitoring platform. Responsible for the early version of social media data collection using Python.
- **Kpiology** *(2010)*: Social media analytics platform. Responsible for the early version of Twitter™ data collection and analytics using Python.
- **Change** *(2010)*: Web-based multiplayer game inspired by Civilization™ written with Django and jQuery. The 3rd place in Web Contest section, National Software Contest (NSC) 2010.
- **Justwords** *(2007)*: Online quote repository written in PHP with Doctrine and self-developed MVC framework. Best technical award, INET Young Webmaster Camp 6.

NOTABLE PUBLICATIONS

- H. Mikami, H. Suganuma, P. U-chupala, Y. Tanaka, and Y. Kageyama, *"ImageNet/ResNet-50 Training in 224 Seconds"*, arXiv:1811.05233 [cs.LG], 2018.
- P. U-chupala, Y. Watashiba, K. Ichikawa, S. Date, and H. Iida, *"Application-aware network: network route management using SDN based on application characteristics,"* CSI Transactions on ICT, pp. 1–11, 2017.
- P. U-chupala, Y. Watashiba, K. Ichikawa, S. Date, and H. Iida, *"Container Rebalancing: Towards Proactive Linux Containers Placement Optimization in a Data Center,"* in The 41th IEEE Computer Society International Conference on Computers, Software & Applications (COMPSAC), 2017.
- P. U-chupala, K. Ichikawa, H. Iida, N. Kessaraphong, P. Uthayopas, S. Date, H. Abe, H. Yamanaka, and E. Kawai, *"Application-Oriented Bandwidth and Latency Aware Routing with OpenFlow Network,"* in The 6th IEEE International Conference on Cloud Computing Technology and Science (CloudCom), 2014.
- P. U-chupala, P. Uthayopas, K. Ichikawa, S. Date, and H. Abe, *"An implementation of a multi-site virtual cluster cloud,"* in The 2013 10th International Joint Conference on Computer Science and Software Engineering (JCSSE), 2013, pp. 155–159
- P. U-chupala, K. Ichikawa, H. Abe, S. Date, and S. Shimojo, *"A Virtual Cluster Manager using a Hierarchical Management Model for Cloud Infrastructure,"* in The 6th International Conference on Ubiquitous Information Technologies and Applications (CUTE), 2011.