

JONNY (ZHAONING) KONG

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RESEARCH INTEREST

Networked & Mobile Systems, Systems for Machine Learning, Edge-assisted AR/VR, 5G.

EDUCATION

Purdue University Ph.D. in Computer Engineering	West Lafayette, IN, U.S. Aug 2020 - Present
University of California, Los Angeles M.S. in Computer Science	Los Angeles, CA, U.S. Sep 2018 - June 2020
Beihang University B.S. in Automation	Beijing, China Sep 2014 - June 2018

PROFESSIONAL AND RESEARCH EXPERIENCE

Purdue University Research Assistant Advisor: Prof. Y. Charlie Hu	West Lafayette, IN, U.S. Aug 2020 - Present
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- Designed machine-learning-as-a-service (MLaaS) frameworks that maximizes the capacity of a GPU server in serving edge-assisted AR mobile apps
- Designed MLaaS frameworks that optimizes the overall accuracy of an AR mobile app that offloads multiple tasks to an edge GPU server [\[1\]](#)
- Profiled and analyzed the performance of next-generation wireless networks, e.g. 5G mmWave [\[5\]](#) and 802.11ad [\[3\]](#)
- Analyzed and designed systems for next-generation mobile apps via edge computing [\[7\]](#) [\[6\]](#), and analyzed their performance on 5G networks [\[2\]](#)

University of California, Los Angeles Research Assistant Advisor: Prof. Lixia Zhang	Los Angeles, CA, U.S. Oct 2018 - Jun 2020
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- Performed extensive experiments and designed the protocols for data synchronization [\[4\]](#) [\[9\]](#), a transport-layer protocol for Named Data Networking (NDN)

NetEase Inc. Software Engineering Intern	Beijing, China Mar 2018 - Jun 2018
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- Used NLP models to suggest related short phrases at each page footer in the [NetEase News](#) app, which leads users to click on and jump to the search page

PUBLICATIONS

Conference Papers

- [\[1\]](#) **Jonny Kong***, Qiang Xu*, Jiayi Meng, Y. Charlie Hu. “*AccuMO: Accuracy-Centric Multitask Offloading in Edge-Assisted Mobile Augmented Reality*”. In **ACM MobiCom 2023**. (*co-primary)
- [\[2\]](#) Moinak Ghoshal, Pranab Dash, **Jonny Kong**, Qiang Xu, Y. Charlie Hu, Dimitrios Koutsonikolas, Yuanjie Li. “*Can 5G mmWave Support Multi-User AR Apps?*”. In **PAM 2022**. [\[pdf\]](#)

- [3] Shivang Aggarwal, **Jonny Kong**, Moinak Ghoshal, Y. Charlie Hu, Dimitrios Koutsonikolas. “Throughput Prediction on 60 GHz Mobile Devices for High-Bandwidth, Latency-Sensitive Applications”. In **PAM 2021 (Best Dataset Award)**. [\[pdf\]](#)
- [4] Tianxiang Li, **Jonny Kong**, Lixia Zhang. Distributed Dataset Synchronization in Disruptive Networks. “Distributed Dataset Synchronization in Disruptive Networks”. In **MASS 2019** (invited paper). [\[pdf\]](#)

Workshop Papers & Posters

- [5] Moinak Ghoshal*, **Jonny Kong***, Qiang Xu*, Zixiao Lu, Shivang Aggarwal, Imran Khan, Yuanjie Li, Y. Charlie Hu, and Dimitrios Koutsonikolas. “An In-Depth Study of Uplink Performance of 5G mmWave Networks”. In **ACM SIGCOMM 5G-MeMU Workshop ’22**. (* co-primary) [\[pdf\]](#)
- [6] Jiayi Meng, **Jonny Kong**, Y. Charlie Hu, Mun Gi Choi, Dhananjay Lal. “Do We Need Sophisticated System Design for Edge-assisted Augmented Reality?”. In **ACM EdgeSys 2022 (Best Paper Award)**. [\[pdf\]](#)
- [7] Jiayi Meng*, **Jonny Kong***, Qiang Xu, Y. Charlie Hu. “Do Larger (More Accurate) Deep Neural Network Models Help in Edge-assisted Augmented Reality?”. In **ACM SIGCOMM NAI Workshop ’21**. (*co-primary) [\[pdf\]](#)
- [8] Lana Ramjit, **Jonny Kong**, Ravi Netravali, Eugene Wu. “Physical Visualization Design (demo)”. In **ACM SIGMOD 2020**. [\[pdf\]](#)
- [9] Tianxiang Li, **Jonny Kong**, Lixia Zhang. “Supporting Delay Tolerant Networking: A Comparative Study of Epidemic Routing and NDN”. In **IEEE ICC ’20 ICN-SRA workshop**. [\[pdf\]](#)

SELECTED HONORS AND AWARDS

Research Awards

- Best Paper Award, EdgeSys ’22
- Best Dataset Award, PAM ’21

Student Awards

- National Scholarship of China, 2017 (Top 0.2% nationwide)
- Annual Outstanding Student, Beihang Univ., 2017 (Top 5%)

TALKS AND PRESENTATIONS

- **GitSync: Distributed Git over Named Data Networking (NDN)**: NDN Community Meeting 2019
- **Edge-assisted AR**: SIGCOMM NAI 2021

PROFESSIONAL SKILLS

Python, C++, Java, Pytorch, Android, CUDA, Docker

TEACHING ASSISTANT

ECE 26400 Advanced C Programming, Fall ’20, Spring ’21, Summer 21, Purdue University
CS 151B Computer Systems Architecture, Winter ’20, UCLA
CS 217A Internet Architecture and Protocols, Fall ’19, UCLA