

# Penghui Ruan

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## Education

Hong Kong, China	The Hong Kong Polytechnic University	Sep 2022 - Jun 2026 (Expected)
• Ph.D. Candidate specializing in Text-to-Video Generation, Generative Models, and Computer Vision.		
Shenzhen, China	Southern University of Science and Technology	Sep 2017 - Jun 2021
• B.E. in Computer Science and Technology, GPA: 3.74/4.00 (Top 10%).		

## Professional Experience

Back-End Developer	Tencent Video Search Group	Apr 2021 - Jun 2021
• Migrated sensitive word filtering service from HTTPS to TRPC, improving efficiency and security.		
• Contributed to the Routing service, enhancing video search capabilities.		

## Publications

- **Penghui Ruan**, Pichao Wang, Divya Saxena, Jiannong Cao, Yuhui Shi. “*Enhancing Motion in Text-to-Video Generation with Decomposed Encoding and Conditioning*”. **Thirty-Eighth Conference on Neural Information Processing Systems (NeurIPS)**, 2024.
- **Penghui Ruan**, Divya Saxena, Jiannong Cao, Xiaoyun Liu, Ruixin Wang, Chi Fai Cheung. “*NASPrecision: Neural Architecture Search-Driven Multi-Stage Learning for Surface Roughness Prediction in Ultra-Precision Machining*”. **Expert Systems with Applications**, 2024.
- Jialun Zheng, Divya Saxena, Jiannong Cao, Hanchen Yang, **Penghui Ruan**. “*Inductive Spatial Temporal Prediction Under Data Drift with Informative Graph Neural Network*”. **International Conference on Database Systems for Advanced Applications (DASFAA)**, 2024.

## Additional Experience and Awards

- **NeurIPS Scholar Award**. NeurIPS Conference, Canada, Dec 2024.
- **First Prize**. Scholarship for Outstanding Students, SUSTech, Shenzhen, 2017 - 2021.
- **Third Prize**. The First Programming Contest of SUSTech, SUSTech, Shenzhen, 2018.
- **First Prize**. The 30th National Middle School Physics Competition, China, 2016.
- **Teaching Assistant**. COMP3511: Legal Aspects and Ethics of Computing, PolyU, Spring 2024.
- **Teaching Assistant**. COMP1012: Programming Fundamentals and Applications (Python), PolyU, Fall 2023.
- **Teaching Assistant**. COMP1011: Programming Fundamentals (C++), PolyU, Spring 2023.
- **Teaching Assistant**. COMP1011: Programming Fundamentals (Java), PolyU, Fall 2022.
- **Exchange Student**. University of Wisconsin-Madison, GPA: 3.83/4.0 (Top 5%), USA, Jan 2020 - Sep 2020.
- **Workshop Participant**. National University of Singapore, “Mining Communities in Big Data with Algorithms and Computational Thinking”, Singapore, Jun 2019 - Aug 2019.

## Languages and Technologies

- **English**: TOEFL: 103, GRE: 320 + 3.5.
- **Programming Languages**: Python, C++, C, Java, SQL, JavaScript.
- **Deep Learning Frameworks**: PyTorch, DeepSpeed.