Peng **Kuang**

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About me

I'm a Ph.D. student in Computer Science at Lund University. My research lies in the intersection of **eye tracking**, **machine learning**, and **programming systems**. I work with programmers to design tools to improve their productivity and experience.

Areas of specialization

Programming Languages & Tools · Empirical Software Engineering · Distributed Computing

Coursework

Machine Learning

Scalable Data Science & Distributed Machine Learning
Applied Machine Learning
Deep Learning
Artificial Intelligence & Machine Learning 2025 (ongoing)
Knowledge Technologies

Computer Science

Compilers
Distributed Systems
Mobile Computing Systems
Advanced Database Systems
Information Retrieval Systems
Enterprise Web Application Development
Computer Architecture & Operating Systems
Data Communications
Autonomous Systems
Interaction Design and Usability
Software Engineering
Project Management

Informally Audited

Program Analysis
Cluster and Cloud Computing
Web Search and Text Analysis

Tools

Git / Docker / Gradle / Jenkins
PyTorch / TensorFlow / React
Agile / JIRA / Unity / Figma
ERP / CRM / Salesforce / SAP

Research Interests

Computational Neuroscience & Cognition (multimodality, for health & education) / Quantum Computing (programming languages & tools) / Brain-Computer Interaction / Virtual & Augmented Reality
ML-Ops / AI Software Engineering & Game Development

RECENT APPOINTMENTS

2021–present	**Ph.D. Candidate/Teaching Assistant (graduate by Mar 2026)** DEPT. OF COMPUTER SCIENCE, LU · Lund, SE - Agile Software Development (Java & Linux/Bash, three semesters) - Software testing (Java, one semester) - Software Development for Large Systems (Java & JS, one semester) - Object-Oriented Modeling and Design (Java, two semesters) - Database Technology (SQL & Java, one semester)
2025 Spring	**Visiting Ph.D. Student** PEACH lab, DEPT. OF COMPUTER SCIENCE, ETH ZURICH · Zurich, CH
2020–2021	**Business System Developer** GUANGDONG TECHNION-ISRAEL INSTITUTE OF TECHNOLOGY(GTIIT) · Shantou, CN - ERP system implementation monitoring (Oracle & Java), and Student Life-cycle Management system (SLcM) research and evaluation. - Integration of the printing system PaperCut with payment service providers, e.g., Alipay. - Migration of the open-source asset management system SnipeIT. - Support for the open-source online learning system Moodle.
2019 Summer	**IT Project Officer (part-time)** BUSINESS SERVICES, UNIMELB · Melbourne, AU - Tested new versions of the Research Hub website, updated the web pages for the project, and assisted the team in other areas such as data analysis, workflow automation and project management.
2018–2019	**Research Assistant (part-time)** SCHOOL OF COMPUTING AND INFORMATION SYSTEMS, UNIMELB · Melbourne, AU - Research about the health-seeking behavior of a small, marginalized cohort of international students in Australia. - Secured a partnership with a leading social app for participant recruitment.
2017–2019	**President & Councilor (part-time)** GRADUATE STUDENT ASSOCIATION, UNIMELB · Melbourne, AU - Led the council to govern the operations of the organization including strategic planning, financial management, risk management, and policies and procedures development.
2018 Spring	**Web Developer (intern)** PSYCHPRESS · Melbourne, AU - Implemented new features and fixed bugs for existing web applications with PHP/Laravel.

EDUCATION

Licentiate in Engineering, *Computer Science, Lund University*	2023 May
Master of Information Technology, *Distributed Computing, University of Melbourne*	2019 Dec
Graduate Certificate in IT, *WAM 80.875, Monash University*	2016 Dec

INDUSTRIAL EXPERIENCE

2015-2016	**Operations Lead** LEADON CO., LTD. · Shenzhen, CN
2014–2015	**Co-founder** APPCOOL CO., LTD. · Chengdu, CN
2013–2014	**Game Monetization Manager** GAMELOFT SE · Chengdu, CN
2012–2013	**Product Manager** ZYNGA INC. · Beijing, CN
2010–2012	**Community Manager** ZYNGA INC. · Beijing, CN
2008–2010	**Product Marketing & Operation Manager** LINEKONG INTERACTIVE · Beijing, CN
2006–2007	**Marketing Specialist** RUNDIAN GAME SOFTWARE · Beijing, CN

CERTIFICATES

2020 AWS Cloud Practitioner Essentials, Amazon
2020 Google Cloud Platform Fundamentals: Core Infrastructure, Coursera
2020 Responsive Web Design, FreeCodeCamp
2020 JavaScript Algorithms & Data Structures, FreeCodeCamp

RECENT GRANTS AND AWARDS

WASP Research Stint Abroad grant for visiting ETH Zurich	*The Wallenberg AI, Autonomous Systems and Software Program (WASP)*	2024
Young Researchers Travel grant	*Royal Physiographic Society in Lund*	2023
International Merit Scholarship	*Faculty of IT, Monash University*	2016

RECENT RESEARCH COMMUNITY SERVICE

Organizing Activities: Co-chair of Publicity for The <**Programming**> Conference 2025. Co-chair for the Posters and Demos track of The <**Programming**> Conference 2024. Student volunteer for The **Psychology of Programming Interest Group** (PPIG) 2023.
Reviewing Activities: Transactions on Software Engineering and Methodology (**TOSEM**) 2024

RECENT OUTREACH ACTIVITIES

Poster at the Natural and Artificial Cognition Workshop 2024
Poster at WASP study trip to the Silicon Valley, US 2024
Poster at AI Nordic Powwow 2024
Presentation at WARA-Ops Workshop on Data-Driven Research and Operations (hosted by Ericsson Lund), 2024
Presentation on Eye Tracking at a partner company Neo4j, 2024
Participation at AI in <Programming> - fika to fika workshop 2024
Poster at WASP study trip to Zurich, Switzerland 2023

RECENT TEACHING

Teaching Assistant (TA), Agile Software Development (ongoing), since 2023 Spring
TA, Software testing, 2024 Autumn
TA, Software Development for Large-scale Systems, 2024 Autumn
TA, Database Technology, 2024 Spring
TA, Object-oriented Modeling and Design, 2021 Autumn - 2022 Autumn

RECENT SUPERVISION

Bachelor thesis in AI ChatBot Development
Assisting in supervising the research assistants on the Gander (Gaze in Code Review) project

THESES

Peng Kuang. 2024. *Toward Gaze-enabled Programming Tool Assistance*. Licentiate thesis. Lund University, Lund, Sweden.

RECENT PUBLICATIONS

Peng Kuang, Emma Söderberg, April Wang, Diederick C. Niehorster, and Martin Höst. 2025. Gaze Communication for First-time Codebase Comprehension: A Controlled Experiment. *Work in Progress*.

Peng Kuang, Emma Söderberg, Diederick C. Niehorster, and Martin Höst. 2023. Applying Machine Learning to Gaze Data in Software Development: A Mapping Study. In *Proceedings of the International Workshop on Eye Movement in Programming (EMIP)*.

Peng Kuang, Emma Söderberg, Diederick C. Niehorster, and Martin Höst. 2023. Toward Gaze-assisted Developer Tools. In *Proceedings of the 45th International Conference on Software Engineering: New Ideas and Emerging Results (ICSE-NIER)*.

Peng Kuang Emma Söderberg, and Martin Höst. 2024. Developers' Perspective on Today's and Tomorrow's Programming Tool Assistance: A Survey. In *Proceedings of the 10th Edition of the Programming Experience Workshop (PX)*.

Peng Kuang, Emma Söderberg, and Martin Höst. 2024. Designing A Multi-modal IDE with Developers: An Exploratory Study on Next-generation Programming Tool Assistance. In *Proceedings of 35th Annual Workshop of The Psychology of Programming Interest Group (PPIG)*.

Alan T. McCabe, Moa Björkman*, Joel Engström*, **Peng Kuang**, Emma Söderberg, and Luke Church. 2024. Ironies of Programming Automation: Exploring the Experience of Code Synthesis Via Large Language Models. In *Proceedings of the 8th International Conference on the Art, Science, and Engineering of Programming*.

Alan T. McCabe, Emma Söderberg, Luke Church, **Peng Kuang**, 2022. Visual Cues in Compiler Conversations. In *Proceedings of the 33rd Annual Workshop of the Psychology of Programming Interest Group Annual Workshop (PPIG)*.

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