

# Lan Lyu

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## EDUCATION

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**Peking University (PKU)**, School of Computer Science Sep 2018 – Jun 2022 (Expected)

### *Bachelor of Science*

- GPA: 3.4/4.0 (Average score: 82)
- Core Courses: Introduction to Computation(A), Operating System, Algorithm Design and Analysis, Design of Digital Logic, Practice of Programming in C&C++, Python Programming and Application, Fascinating Robot

## TRAINING

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**Simon Initiative LearnLab Summer School**, School of Computer Science, CMU Jul 2021 – Jul 2021

- Accepted in Computational Models of Learning Track. Received a full scholarship.
- Used BKT models and ran comparative tests to simulate how problem sequences influence learning outcome.

**APAC Software Product Sprint**, Google Inc. Jul 2020 – Aug 2020

- Supposed to be a Google summer internship, but was converted to an online SPS program due to COVID-19.
- Developed a personal portfolio website from scratch independently with HTML and JavaScript.
- Led a team of three to implement “writing a diary in the email” project though a member had quitted midway.

## RESEARCH EXPERIENCE

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**Prediction of Eating Disorders via Eye-tracking Experiments and Machine Learning** Sep 2021 – Present

*Intern, Department of Machine Intelligence & Department of Psychology, PKU*

- Designed new eye-tracking experiment diagrams to detect attention bias of each eating disorder sub-types.
- Conducting experiments. Plan to apply machine learning methods to build sub-type prediction model.

**Eyes-free Gesture-based Interaction for Editing Dictated Text** Jul 2021 – Present

*Remote Intern, NUS-HCI lab, NUS*

- Developed a gesture-based text editing tool for eyes-free situations such as walking, driving, bedtime.
- Self-lead research with advice from Prof Shen. Built a Node.js tool and conducted pilot studies. Writing paper.

**Semantic Symbolic Representation in Indoor Scenes for Robot Rearrangement** Feb 2021 – Jun 2021

*Intern, Center on Frontiers of Computing Studies, PKU*

- Built an indoor agent that can identify which objects have been moved and restore them to their initial places.
- Responsible for data processing, reconstructing 3D point clouds, writing code for robot’s exploration strategy.
- Reached a non-skip success ratio of 80% with types of each object given in the AI2-THOR environment.

**Generative Automatic Furniture Arrangement via Dynamic Graph Learning** Jun 2020 – Dec 2020

*Intern, Leonidas Guibas Lab & Center on Frontiers of Computing Studies, Stanford & PKU*

- Proposed a model that automatically generates indoor layouts based on the given furniture by leveraging dynamic graph neural networks (GNN) to implicitly learn the prior distribution of scene layout.
- Took all the code work after joining halfway. Modified the GNN to iterate dynamically. Used a conditional variational auto-encoder (VAE) to satisfy the diversity of furniture arrangement.
- Increased the arrangement accuracy rate from 70% to 91% in Minimum Matching Distance.

## Suicidal Ideation Detection on Social Media Posts

Oct 2020 – Apr 2021

### PKU “Challenge Cup” Academic Competition

- Analyzed the discourse features of suicide users via word embedding. Produced a high-risk suicide dictionary.
- Trained a model which automatically judges whether a post conveys suicidal ideation. Reached 71% accuracy.

## CONFERENCE PRESENTATIONS

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Doorway Effect Consciousness Turing Machine (Aug 2021)

International Joint Conference on Theoretical Computer Science (IJTCS), Beijing, China

## WORKING EXPERIENCE

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### BodyPark Inc.

Mar 2021 – Sep 2021

#### AI Product Manager Intern

- Optimized the AI virtual coach on its counting and guidance-feedback system.
- Produced requirement documents and negotiated with data collection and labeling companies.
- Teased out current counting implementations and checked each rule with coaches. Built a new counting-rule library with unified structure, clear workflow, and support for further addition of new actions and rules.
- Designed the guidance-feedback function and ran three iterations. Users’ satisfaction rate increased from 67 % to 91%. 2 users remained as long-term customer because of this function.

### Yunji Sharing Technology Co., Ltd.

Jun 2020 – Aug 2020

#### Product Manager Intern

- Responsible for designing a warm-up game for the yearly promotion day.
- Conducted user surveys in the member groups. Used Axure to draw the product requirement document (PRD).
- Synced the timeline and checked risks with UX designers, front-end engineers and risk-management experts.

## EXTRACURRICULAR ACTIVITY

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### InsidePKU Magazine (unofficial Campus Media) Senior Photographer

Oct 2018 – May 2020

- Produced 4 issues of paper magazine every year. Had over 30,000 subscribers in the WeChat official account.

### Student Union of PKU EECS vice president

Oct 2018 – May 2020

- Organized a 7-day programmers’ festival with 5 online and offline activities and more than 1,000 participants.

### Computer Teacher in Hebei and Guizhou Province Volunteer

Apr 2019 – Jun 2019

- Taught Office, Photoshop, basic Python in Fengshan No.2 Middle School and Congjiang No.1 High School.

### Investigation on Youth Programming Education in Zhejiang Province Volunteer

Apr 2019 – Jun 2019

- Interviewed high school students and teachers, university professors, relevant companies, training institutions.

## AWARDS

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Prize for Public Welfare Work of Peking University

## SKILLS & INTERESTS

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- Computer: C++, python, Java, SQL, HTML, JavaScript, Linux/Bash, Git
- Language: Chinese (native), English (fluent), Spanish (Intermediate)
- Design: Adobe Photoshop, Adobe InDesign, Adobe Illustrator, Figma, Axure RP
- Interests: Photography, Reading, Hiking, Art movies, ACG & RPG games, Badminton, Swimming, Cooking