

# Pengxiang Zhang

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## SUMMARY & OBJECTIVE

Experienced software engineer with a passion for solving complex problems and delivering high-quality code. Known for meticulously testing and debugging code to ensure flawless performance, and constantly seeking out new challenges to expand my skill set. With 2 years of experience in web/software development, I have honed my skills in developing scalable and well-documented code to solve real-world problems. As a dedicated problem solver and multi-tasker, I thrive in fast-paced environments and enjoy collaborating with cross-functional teams. I am seeking a software engineering/development role that will allow me to apply my expertise and continue to grow as a professional. Particularly interested in opportunities as a software engineer/developer.

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## EDUCATION

**Northwestern University** | Evanston, Illinois Sept. 2021 - Dec. 2022

*Master of Science in Computer Science. GPA: 3.86/4.00*

**University of Nebraska - Lincoln** | Lincoln, Nebraska Aug. 2018 - May 2021

*Bachelor of Science in Computer Science with Math Minor. GPA: 3.65/4.00*

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## SKILLS

**Programming Language:** C#, Golang, Java, JavaScript, Python, Ruby, Rust

**Front-End Development:** Bootstrap, CSS3, Flask, HTML5, jQuery, JSON, Rails, React, Scss, TypeScript

**Databases:** Firebase, MongoDB, MySQL, PostgreSQL

**Cloud Technologies:** Amazon Web Services (AWS) such as Amplify, EC2, Glue, Lambda

**Testing:** Jest, Postman, React-Testing Library

**Version Control & Admin:** Confluence, Git, Jira

**Development Methodologies:** Agile, Scrum, Waterfall

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## INTERNSHIP EXPERIENCE

**Syngenta Group** | IT Intelligent Automation Engineer - Intern | Chicago, IL Jun. 2022 – Dec. 2022

- Developed and maintained a large cloud automation solution using Gatsby (React + GraphQL) as the primary frontend technology, following best practices in software development and utilizing Git for version control and Gitlab for code repository management to ensure seamless collaboration among team members.
- Utilized AWS services such as Glue Job for automating data processing tasks, leveraging serverless architecture to optimize scalability and minimize operational overhead, and ensuring seamless integration with other systems.
- Integrated multiple third-party APIs and services to create a seamless user experience.
- Improved software products' performance by fixing, updating, and optimizing bugs, resulting in a smoother user experience and increased efficiency.
- Contributed to the evaluation of support tickets and error messages that interfered with the daily functioning of the automation system, utilizing advanced troubleshooting techniques and working closely with team members to identify and resolve issues.

**Alpaca Inc.** | Software Engineer Intern | Waterloo, Canada Jun. 2021 - Sept. 2021

- Collaborated with a team of 4 members to develop software that enables data scientists to run data model training using just one line of code, utilizing agile development methodologies and adhering to best coding practices.
- Developed and executed comprehensive software system testing and validation procedures, ensuring high-quality software delivery that meets client requirements.
- Modified existing software to make it adaptive to new privacy requirements, resulting in enhanced performance and a 300% acceleration in the preparation of the running environment set on AWS.

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## CAMPUS EXPERIENCE

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**Northwestern University** | Research Assistant

Mar. 2022 - Present

- Led a team of 6 members in setting up an experimental workflow using React and Flask for a legal chatbot, integrating Qualtrics and MTurk to streamline data collection. Develop and implement best coding practices and project management methodologies to ensure timely and accurate software delivery.
- Design research projects that apply valid scientific techniques to explore complex legal questions, utilizing data collected from the experimental workflow to structure uncompromised and efficient analyses. Collaborate with faculty members to ensure the research aligns with the overall research goals and objectives of the institution.
- Develop a chatbot using Google Dialogflow and Landbot, enabling people to inquire about commercial property legal issues. Utilize natural language processing (NLP) to improve chatbot accuracy and user experience, and ensure the chatbot complies with legal and ethical guidelines.

**University of Nebraska - Lincoln** | Research Assistant / Developer

May 2020 – May 2021

- Coordinate a team of 3 members using Flask (Python) to develop a user-friendly web interface that presents data about the research of polyphenol metabolism for human health improvement. Incorporate a server to run BLAST and HMMER to analyze sequences, and optimize the website for efficient data processing and visualization.
- Deploy the website ([bcb.unl.edu/dbpup/](http://bcb.unl.edu/dbpup/)) to a server, ensuring it is secure, accessible, and optimized for different web browsers and devices. Publish a research article (DOI: 10.1128/AEM.01851-21) that showcases the website's capabilities and its potential for future research applications.
- Coordinate and supervise the transition of the laboratory server to Amazon AWS, improving the efficiency and scalability of the research infrastructure. Implement best practices for cloud server management, such as automatic backup and disaster recovery, and ensure the server complies with institutional security policies and regulations.

**University of Nebraska System** | IT Support Specialist | Lincoln, NE

Sept. 2019 – May. 2021

- Provided comprehensive technical support for over 20,000 students and faculty/staff, addressing issues related to hardware, software, network, and system access via email, phone, support tickets, or in person. Offered timely and effective solutions that minimize downtime and ensure user productivity.
- Created documentation and training materials that enable the user community to extend their skills, leverage system features, and find resolutions to IT inquiries on their own. Collaborated with IT colleagues to develop a centralized knowledge base that consolidates frequently asked questions, troubleshooting guides, and other resources, which reduced the number of redundant requests and improved the overall quality of support.

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## PROJECT EXPERIENCE

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**UHangout** | Team Developer

Jan. 2022 – Mar. 2022

- Developed a mobile app using React in a team of 8 students, facilitating students to socialize and invite friends to join group events
- Utilized modern and sustainable agile software development techniques such as backlogs, user stories, velocity charts, and test-driven development to expedite value delivery to clients
- Monitored and tracked project milestones and deliverables, and collaborated with team members to identify and resolve issues.

**TA Management System** | Squad Lead, Development Manager

Aug. 2020 - May 2021

- Managed a team of 6 members to develop a one-stop website using Ruby on Rails that assists with the learning management system
- Applied Agile Software Development techniques, such as recruitment management, office hours, evaluation, and an on-demand appointment request system, to certain feature development
- Achieved Senior Design Individual Rock Star status (Top 10%)