XIAOCHEN (NIGEL) LU

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EDUCATION

New York University New York, NY
Master of Science in Computer Science **(**Cumulative GPA: 3.88/4.0) May 2025
Relevant Coursework: Big Data, Algorithms, Advanced Database, Deep Learning

New York University, NYU Shanghai New York, NY and Shanghai, China
*Bachelor of Science, Data Science, minor in Computer Science (*Cumulative GPA: 3.91/ 4.0) May 2023
Magna Cum Laude; NYU Honors Scholar; Dean's List 2019-2023
Relevant Coursework: Applied Internet Technologies, Computer Architecture (Objective C), Data Structures (OOP), Databases, Machine Learning (TensorFlow), Natural Language Processing (PyTorch), Data Analytics, Decision Model and Analysis

SKILLS

Coding Languages: SQL, R, Python, JavaScript, TypeScript, Java, Objective C

Software Tools: PostgreSQL, MySQL Pandas, NumPy, SciPy, R Studio, Matplotlib, PyTorch, TensorFlow, Seaborn, Scikit-learn, React.js, Vue.js, Django, Express.js, Spring Boot, Maven, JPA, Thymeleaf, Git, Docker, Kubernetes, Chart.js, OpenCV

Other Tools: Circle/Travis CI (CI/CD), AWS EC2/EB/RDS, Agile Dev, Linux/UNIX, Tableau, Office/Google Suite

PROFESSIONAL EXPERIENCE

eBay Inc., Software Engineering Intern – Cloud Infrastructure Team, (Shanghai, China) **Sept. 2022 – Aug. 2023**

- Innovated an Average-Time-to-Business (ATB) dashboard using ***Redux***, ***React.js***, and ***Spring Boot*** to monitor cluster statuses and send checkout alerts, reducing crisis response time by 25% and boosting service availability from 99.14% to 99.8%
- Implemented a predictive analytics model using ***Scikit-learn*** and integrated it to ATB Dashboard to forecast system load and potential downtime, further reducing system downtime by 40%
- Developed a ***SQL-based tool*** for automating anomaly detection by *analyzing patterns and metrics* in eBay's cloud infrastructure performance data, benefiting 100+ infrastructure engineers by providing predictive insights into system reliability

Kaizntree Co., Full-stack Software Engineer, (New York, NY and Remote) **Sept. 2021 – Feb. 2024**

- Built a one-stop management solution for small businesses using ***Vue.js***, ***Django REST framework***, and ***PostgreSQL***, earning the trust of customers by reducing their time spent on management tasks from 15 to just 2 hours per week
- Designed and executed a data-driven market analysis strategy using ***Pandas*** and ***Seaborn***, identifying key growth opportunities for customers, resulting in an estimated 35% increase in customer acquisition during the roll-out window of this feature
- Collected and analyzed 100+ user feedback using ***Pandas*** and adopted ***Scrum Development, Circle CI/CD*** with ***Heroku*** to minimize friction throughout the software development lifecycle (SDLC), enabling Kaizntree to address BUGs 40% faster
- Spearheaded the ***2-way integration*** between Kaizntree and 4 major sales channels using ***OAuth2*** (Shopify, Square, Etsy, and Xero) and automated stock & order sync across platforms, putting an end to manual updates and stock inconsistency on different channels

Expsoft LLC., Software Engineering Intern, (Wuxi, China) **May 2021 – Sept. 2021**

- Leveraged the power of ***Spring Boot***, ***Thymeleaf***, ***JPA***, ***Maven***, and ***MySQL's stored procedures/triggers*** to build highly automated and customizable online auditing platforms for governments
- Secured a project from the Soochow government worth $400,000 to supply a customized audit platform

RESEARCH & PROJECTS

Few-shot Segmentation with Adaptive Data Augmentation and Cross Attention (link to paper on arXiv) **Mar. 2022 - May 2023**

- Proposed an instance-aware ***data augmentation*** strategy to improve support image diversity and reduce distribution inconsistency, boosting model performance by 3.7% in ablation studies
- Incorporated a 4-D consensus cross attention module in ***PyTorch*** to align query and support features, increasing accuracy by 5.4%
- Built a scalable ***PyTorch*** codebase for running few-shot segmentation research experiments ***distributedly*** on computing centers

Multimodal Online Student Engagement Dataset (link to blog) **May 2021 – Mar. 2022**

- Created a 17GB labeled engagement detection dataset of 300+ participants in online learning settings
- Established a CNN-RNN hybrid baseline model to process spatial and temporal signals simultaneously

Evaluating Parameter-efficient Tuning Methods in Low-data Regimes **Sept. 2021 – Dec. 2021**

- Reproduced four SOTA parameter-efficient tuning methods based on HuggingFace libraries
- Evaluated the performance of these methods on various NLP tasks (e.g., sentiment analysis, Q&A) with various train/test partitions
- Concluded with a research paper how to balance performance and converging speed in parameter-efficient tuning