XIAOCHEN (NIGEL) LU

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EDUCATION

New York University, Tandon School of Engineering — New York, NY
M.S. in Computer Science, awarded a scholarship of $6,000 — Sep 2023 – May 2025
New York University, NYU Shanghai — Shanghai, China
B.S. in Data Science, double major in Business & Finance, minor in Computer Science — Sep 2019 – May 2023
One-year study-away at New York University, New York Campus — Sep 2021 – May 2022

- Cumulative GPA: 3.9/4.0, Data Science Major GPA: 3.96/4.0
- Honors & awards: Magna cum Laude, NYU Honors Scholar, NYU Shanghai Excellence Award
- Courses: Applied Internet Technologies, Data Structures, Databases, Information Visualization, Computer Architecture, Probability & Statistics, Econometrics, Linear Algebra, Multivariable Calculus

SKILLS

- **Lingual**: proficient in English and Chinese speaking/writing
- **Programming**: Advanced intermediate level in Python, JavaScript, and Git VCS, advanced beginner in Linux terminal
- **Development**: Familiar with Django, ReactJS, understand common data structures, algorithms. Advanced beginner level in SQL, markdown, and LaTeX

PROFESSIONAL EXPERIENCE

eBay Inc., *Software Engineering Intern* — Shanghai, China
Built, improved, and redesigned some of eBay's cloud platform UIs — Sep 2022 – Jul 2023

- **Average-Time-to-Business (ATB) Dashboard**
  - Proposed a web-based dashboard for live monitoring of cluster status and on-going CRs.
  - Led the implementation of the ATB dashboard as a modern single-page application by employing Redux, Antd UI library.
  - Updated the dashboard periodically to cater to different needs, serving a team of over 60 infrastructure engineers.
  - ATB dashboard allowed for faster incident response times and smoother rollout processes.
- **KeyHub (encrypted email UI for password exchanges)**
  - Migrated eBay's KeyHub from Vue to React to align with eBay's frontend tech stack.
  - Upgraded KeyHub's encryption library to the latest OpenPGP for enhanced security.
  - Refactored over 95% of the code for reduced API calls, faster rendering speed, and ease of use (tooltips and feedback).
  - Integrated the new KeyHub to eBay's cloud console UI as a plugin using JS-Plugin.
- **Public L7 Rule UI**
  - Built an extremely user-friendly UI for configuring and viewing the status of public L7 rules on eBay's cloud platform.
  - Embedded helpful validation feedback for most fields in the L7 rule form via API calls (async)/Regex (real-time).
  - Designed a robust auto filling mechanism to manage the complex dependencies/relationships between fields, allowing the user to fill out the large form with minimum effort.

Kaizntree Ltd., Full-stack Engineer — New York, NY & Remote
Established a startup building a one-stop management platform for small businesses (website here) — Sep 2021 – Sep 2022

- **Kaizntree UI & Backend**
  - Adopted VueJS combined with Vuetify component library to offer users a consistent and fluid UI experience.
  - Carefully designed and delivered a one-stop platform covering needs from inventory transaction processing, product building and sales to item tracking via QR codes, helping over 40 small businesses to manage their workflow.
  - Integrated with major sales channels like Shopify, Square, and Xero based on their open standards to facilitate users' transition from other platforms, where users can easily migrate all previous data to Kaizntree.
  - Leveraged Django's versatility to build backend services that support rollbacks and agile responses to allow safer version iterations and cater to evolving user demands.
- **NYU Summer Launchpad**
  - Got selected to the 2023 NYU summer launchpad under our team's effort and strong technical foundation.
  - Received a $10,000 non-dilutive funding and $10,000 AWS credits for running our online platforms.

RESEARCH & PROJECTS

Few-shot Segmentation with Adaptive Data Augmentation and Cross Attention — NYU Shanghai
*Research Assistant mentored by Professor Li Guo. Co-authored a paper and submitted to **CVPR 2023*** — Mar 2022 to May 2023

- Proposed an instance-aware data augmentation strategy to improve support image diversity and reduce distribution inconsistency between query and support images in low-data regimes.
- Incorporated a 4-D consensus cross attention module to align query and support features for improved generalization ability.
- Used PyTorch to build a scalable codebase for few-shot segmentation research, enabling easy backbone swaps and semi-auto experience in running experiments on Linux high-performance computing clusters.
- Set up a neat and re-usable visualization codebase (based on Open-CV, Pytorch, and plotting libraries like Matplotlib) with well-documented APIs to help verify and visualize the results of our proposed model.

Multimodal Online Student Engagement Dataset — SMART-LAB NYU Abu Dhabi
Research Assistant mentored by Professor Hanan Salam — May 2021 to Mar 2022
*Co-authored a paper and published on **Nuclear Physics B** journal.*

- Created an engagement detection dataset in online learning settings with post-class survey results as auxiliary label.
- Established a CNN-RNN hybrid model that processes spatial and temporal signals as the baseline for the dataset.
- Adopted statistic tools like significance tests to validate the correlation between personality and engagement levels.

VOLUNTEER EXPERIENCE

English Teacher, **Steppingstones Shanghai** — Oct 2019 to Dec 2019

- Teach English for a class of 52 elementary-level children of migrant workers in Shanghai to promote education equality.