Angel (Xiaowen) Zhang

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Education

Yale University, Graduate School of Arts & Sciences, New Haven, CT *05/2018*

- Master of Science, Computer Science
- **Selected Coursework:** Database Systems, Deep Learning Theory and Applications, Distributed Systems, Intelligent Robotics, Advanced Management of Software Development, and Natural Language Processing

The Cooper Union, Albert Nerken School of Engineering, New York, NY *05/2017*

- Bachelor of Engineering, Electrical Engineering Cumulative G.P.A: 3.81/4.0, Summa Cum Laude
- **Honors: Dean's List**, all semesters**; Full-tuition Scholarship; Hoffman Beller Prize,** for merit in engineering studies
- **Selected Coursework:** Artificial Intelligence, Computer Graphics, Software Eng & Large System Design, and Entrepreneurship

Computer Skills

- Programming Languages: Java, C/C++, SQL, JavaScript, HTML, and MATLAB
- Software Knowledge: Eclipse Java, Xcode, Adobe Dreamweaver, and Microsoft Office

Technical and Management Work Experience

MarketAxess, New York, NY

Application Developer, Application Programming Interface (API) Team *06/2018 - Present*

- Enhance and support API solutions and strategies to the MarketAxess e-Trading Platform. Duties are performed using Oracle, Java, Gradle, Python, JMS Messaging, FIX Protocol to design a redundant, low latency, multi-threaded system.
- Projects include software development for handling the processing of Orders from external Order Management/Execution Management Systems, sending Post Trade Messages, Allocation services, Client and Dealer Trading APIs, Market Data Feeds, Regulatory Reporting services, Settlement services, and other internal monitoring.
- Work closely with Business Analysts, Quality Assurance, Customer Integration Teams discussing specifications, test plans, and customer setup. Collaborate with Production Support investigating and resolving issues which arise in the Production environment.
- Present technical walkthrough documentation describing work performed throughout each release cycle to various teams.

Artsify, New York, NY

Co founder & Software Developer *01/2017 – 05/2018*

- Designed and marketed a web service product, Artsify, which is an online fine arts marketplace that aims to simplify the art sale process. Designed user interface using HTML and CSS, and constructed the art database using MySQL. Launched the minimum-viable-product(MVP) in May, maintained the current website service, and updated the product features weekly.
- Delegated team to financial stability oversight, marketing campaign design, and software developments. Connected with potential influencers, suppliers, and clients. Conducted market researches, competitive analysis, and financial projections, tested business hypotheses, and quickly adapted feedbacks. Collaborated and performed pitch to prospective artists and startup coaches.
- One of four finalists in the SASETank 2017 entrepreneurial competition, and will present in the SASE conference in October.

The Cooper Union for the Advancement of Science and Art, New York, NY

MATLAB Instructor, Electrical Engineering Department *01/2016 - 05/2017*

- Instructed students on using MATLAB, a leading computational mathematics platform for engineers. Developed syllabus through discussions with the department Dean, prepared weekly presentations for a class of 15 students, and hosted office hours. Designed, assigned and graded select problem sets throughout the course. Cooperated students' feedbacks into course schedule.

Intel Corporation, Shanghai, China

Summer Intern, Platform Solution Architect (PSA) / Internet of Things (IoT) Group *Summer 2015*

- Collaborated with multi-company session for developing a live interactive IoT Demo Preparation in an application of a network of video processors at Intel Developer Forum (IDF) 2015 San Francisco.
- Interacted directly with clients through weekly meetings, modified the architecture design for Big Data system, and provided customized platform solutions including hardware and software approaches to clients.

INSIGMA Technology Co. Ltd., Hangzhou, China

Summer Intern, Research and Development Department *Summer 2014*

- Customized the design of ARM cluster for the development of image processing software under the supervision of the head of hardware department.

Engineering Projects - http://www.angelzxw.com/home/#projects

Kitty Or Doggo?, *Deep Learning Theory and Applications, Yale Graduate School of Arts and Sciences* *Spring 2018*

- Led a team of four, and implemented three different models as image classifiers to distinguish dogs and cat, which is the Dogs vs. Cats competition from Kaggle.
- Designed a simple convolutional neural network architecture with five layers as a baseline, and tuned learning rate, filter sizes, stride, dropout regularization rate to optimize resulting accuracies. Further expanded the network by adding convolutional layers and pooling layers. Utilized transfer learning approach by adopting the pre-trained VGG16 network model and a two-step fine-tuning scheme to enhance the performance, and achieved the highest accuracy of 97.8%, being 3.897% higher than the average of publicly documented records.

NinjaBrite, *Advanced Management of Software Development, Yale University School of Management* *Fall 2017*

- Organized a team of four, and created an online event management system, hosted by Heroku. Implemented a NodeJS application based on Model-View-Controller(MVC) architecture. Designed the interface in HTML, CSS, and JavaScript. Stored the user data in a PostgreSQL database.
- Continuously tested each release against automated tests along with SQL injections, CSRF, and XSS. Applied Google Analytics to conduct an A/B test and perform traffic analysis.
- Practiced SCRUM and Agile software process with effective use of Git for version control and TrelloBoard for managing product and sprint backlogs. Hosted weekly meetings for sprint planning and retrospective, and documented the progress as sprint reports.

Research Project: Blockchain in Smart City Application, *Distributed Systems, Yale Graduate School of Arts and Sciences Fall 2017*

- Worked in a team of two, and deployed Blockchain on a peer-to-peer system in C++, considering a specific Smart City scenario, where hashed information of the image and video from surveillance cameras are managed and shared by multiple IoT nodes for decentralization and public auditing purposes.
- Created a real-time web monitoring application to visualize all the information contained in the Blockchian blocks.

Coopa: The MicroMouse, *Senior Electrical Engineering Projects, Cooper Union Fall 2016 & Spring 2017*

- Led a team of three, and designed the system architecture of a robot mouse, cooperating locomotion, sensing, control, and software subsystems so that the robot autonomously solves a 16-by-16 random maze in the Micromouse Competition hosted by IEEE.
- Invented a motion calibration algorithm in Arduino, and implemented a maze solving algorithm based on Flood Fill Algorithm.

Dynamic Environment Mapping, *Computer Graphics, Cooper Union Spring 2017*

- Innovated an interactive environment mapping application, using JavaScript and WebGL, which illustrates surrounding scene and moving cubes reflected on the surface of an object. Researched and cooperated with a texture mapping technique, Skybox.

Othello, *Artificial Intelligence-Independent Study, Cooper Union Fall 2016*

- Produced a game-playing program, which plays Othello against users, based on the Minimax Search with Alpha-Beta Pruning Algorithm in Java. Designed a game GUI in java swing, indicating scores, a log of both players' moves, and next possible moves.

Set Game Project, *Software Engineering and Large System Design, Cooper Union Spring 2016*

- Designed an online version of card game SET, allowing users to customize game modes and to play against each other in real time.
- Led design of system architecture based on client-server model, constructed database in MySQL, implemented game website in JSP, and creating game-login GUI in Java swing.

Patent

Forthcoming patent (co-inventor), *Adaptive Workload Distribution for Network of Video Processors.* Intel Corporation, Shanghai, China, 2015