SHEN LIU

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EDUCATION

Purdue University, West Lafayette, IN
---BS in Electrical Engineering (2011-2015)
Overall GPA: 3.62|4.00
Core Course GPA: 3.74|4.00

UC San Diego, San Diego, CA
---MS in Electrical Engineering (2015-2017)
Overall GPA: 3.54|4.00

SKILLS & REWARDS

Computer Languages: Java, JavaScript, Python, C, HTML5, CSS3, Matlab, Git
Software Development: AngularJS, Node.js, JQuery, BootStrap, MongoDB, Bower, Grunt, Photoshop

Certificates & Rewards: Coursera AngularJs & BootStrap Certificates, Dean's List & Semester Honors 2013-2015

EXPERIENCES

Kingsound, Shanghai, China (Web Developer Intern) 6/2016 to 9/2016

- Collaborated with senior developers to developed the website for Kingsound with **JQuery** and Javascript.
- Designed website interface with Photoshop and Fireworks.
- Managed and Preprocessed the backend user data.

PROJECTS

Convolutional and Arificial Neutral Network (Deep Learning) 4/2017-PRESENT
https://ml.supshen.com

- Created different models in both **Artificial Neutral Network**(ANN) and **Convolutional Neutral Network**(CNN) using **Tensorflow** and **Keras**
- Trained the NN model over 200000+ handwrtting letters and digits.
- Evaluated each m**odel** based on 10000+ test set and achieved an accuacy of 98% without overfitting.
- Utilized **KerasJS** to export the model and created a simple web app for DNN demo.

Confusion Restaurant Full Stack Development (Full Stack Developer) 3/2016 to 5/2017
https://shen-confusion.com

Client Side

- Implemented **AngularJS** framework to support restaurant data-binding and back end communication.
- Designed responsive front end with **BootStrap**. Utilized **Bower** to fetch web packages.

Server Side

- Developed REST server with **Node.js** and **Express** to handle HTTP request and serve restaurant and user data.
- Applied **Json web tokens (JWT)** and Passport node module for user login and authentication.

Database

- Created user and restaurant Schema using Mongoose ODM and stored in **MongoDB.**
- Established connection between REST server and MongoDB server.

Principal Components Analysis with Eignefaces 9/2016 to 12/2016

- Trained 190 trained faces to generated 190 Eigenfaces(Principal Components).
- Reconstructed 10 testing faces with Eigenfaces after applying PCA.
- Combined **Support Vector Machine**(SVM) with Eigenfaces to classify neutral expression and smiling expression faces, and achieved an accuracy of 87%.

Embedded System Based Robot Design, Purdue (Software Engineer) 1/2015 to 5/2015
https://www.youtube.com/watch?v=pAW3NXG_ZkY

An autonomous GPS-enabled searching robot with ability of environmental data collection and obstacle avoidance.

- Developed an **Android App** to interact with the robot via Bluetooth module for direction control, GPS data transmission with **Google Map API**, and data collection.
- Collaboratively Integrated various electronic modules over different communication interfaces in C.

- Collaboratively designed the printed circuit board (PCB).
- Conducted microcontroller, motor driver and circuits test.

Pattern Recognition Project, UCSD (Programmer) 9/2015 to 12/2015

- Recognized approximately 90% of the “Stop Sign” pattern given various input photos.
- Detected approximately 88% of the car lanes given various input photos.
- Computed 2D cross-correlation coefficient in Matlab to match the “Stop Sign” pattern precisely.
- Implemented Hough Transform, Canny Edge Detection and Histogram of Oriented Gradients (HOG) for car lane detection in Matlab.

3D Facial Recognition Project, Purdue (Project leader / Software Leader) 1/2015 to 5/2015

- Utilized 3D-capture technique to obtain 3D image and 3D coordinates of model’s faces and processed in Matlab.
- Developed algorithms to extract 3D landmarks and contour information of model’s face.
- Designed algorithms to detect angle of faces in order to recognize the faces from different angles.