

# Zhidan LUO

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## **EDUCATION**

<b>University of Virginia</b> <i>Computer Engineering, MEng</i> <ul style="list-style-type: none"><li>Present GPA: 3.957/4; Degree expected in May. 2020</li></ul>	2018 – Present VA, US
<b>University of Electronic Science and Technology of China</b> <i>Electronic Information Engineering, BEng</i> <ul style="list-style-type: none"><li>Overall GPA: 88.54/100; Rank: 13/240;</li></ul>	2014 – 2018 Chengdu, China
<b>University of Glasgow</b> <i>Electronic and Electrical Engineering, BEng, with Honors of the Second-First Class</i> <ul style="list-style-type: none"><li>Overall GPA: 18.832/22; Rank: 13/240;</li></ul>	2014 – 2018 Glasgow, UK

## **AWARDS & HONORS**

• Top Winner of 2017 UESTC Technological Design Team Competition	June. 2017
• UESTC Glasgow Academic scholarship (Top 5% of all)	Nov. 2017
• First Prize of UESTC Merit-based scholarship	Nov. 2017
• Second Prize of UESTC Merit-based scholarship	Nov. 2016
• Second Prize of UESTC Merit-based scholarship	Nov. 2015

## **EXPERIENCE**

<b>Information Theory of Deep Learning</b> <i>Team Leader (3 members group)</i> <ul style="list-style-type: none"><li>Verified the inadequacies of Information Bottleneck theory</li><li>Information plane trajectory is predominantly influenced by activation functions</li><li>There is no causal connection between compression and generalization</li><li>The compression phase does not arise from stochasticity in training</li><li>Compression happens concurrently with the fitting process</li></ul>	Aug. 2018 – Present
<b>CNN and MLP Based Classification on Articles of Clothing</b> <i>Individual Project</i> <ul style="list-style-type: none"><li>Built CNN and MLP neural network framework based on Keras for classification on articles of clothing in Google Colab cloud platform</li><li>Based on Scikit-learn's grid search and cross validation to optimize parameters</li><li>PCA and logistic regression models were used to compare the performance of neural networks</li></ul>	Jan. – Apr. 2019
<b>Sound Effects for Games and Interactive Applications</b> <i>Individual Project</i> <ul style="list-style-type: none"><li>Developed new algorithms that will generate nonrepetitive sound effects, based on recorded sound samples and controllable parameters</li><li>Discrete wavelet transform was applied to abstract features</li><li>PCA was applied to abstract key features and morphed by random processing model</li></ul>	Jan. – Jun. 2018
<b>MMS (Magic Music System) Design</b> <i>Team Leader (6 members group)</i> <ul style="list-style-type: none"><li>Designed and produced a hand-gesture-control music player</li><li>Based on SVM, identified hand gestures to control actions of music through data collected by acceleration sensor</li></ul>	Oct. – Dec. 2017

**China Mobile Limited, Chongqing Branch**

Jan. – Feb. 2017

*Research Intern*

- Collected and analyzed wireless network performance data and drafted network quality report for department review
- Supported business operation evaluation

**Artificial Neural Network Based Self Driving Vehicle**

Jan. – Jun. 2017

*Tracing Sub-Team Leader (10 members group)*

- Designed and produced a self-navigating vehicle capturing data with a wide-angle camera
- Based on MLP feedforward neural network model and image processing technology, designed an algorithm for automatic tracing and turning of robot vehicles
- Acquired excellent planning and organizational skills

**Photoelectric Effect Based ECG Auto-displaying**

Feb. – Jun. 2016

*Team Leader (3 members group)*

- Designed and assembled a portable Heart-rate Monitor with Mbed, photoelectric sensor and LED screen which enables electrocardiograph auto-display

**EXTRAL-CURRICULAR ACTIVITIE****Animenz Live 2016 China Tour, Chengdu Concert***Volunteer Manager & Liaison Officer*

Apr. – Sep. 2016

- Responsible for volunteer arrangements, promotion, budgeting and pre-event coordination

**The 3rd UESTC ACG Music Festival***Piano Solo & Promotion Manager*

Mar. – Jun. 2016

- Planned events venue, sponsorship and live broadcasting provider; Led online and offline promotion campaigns; Presented Piano performance

**Summer Read, Safe Growth SUMMER CAMP***Volunteer*

July. 2016

- Assisted local Women's Federation organizing library tour for children in difficulties. Encouraged children to be passionate and set life goals through reading, movie and fire brigade visiting

**PERSONAL**

- Programming Language: proficient in: Python, R, MATLAB, C, Latex, Markdown  
Also have basic ability: Java, Assembly, VHDL, Arduino
- Industrial Software Skills: Keras, TensorFlow, Scikit-learn, Jupyter-notebook, Google Colab, Spyder/PyCharm, RStudio, Overleaf, SCILAB, MS Office, Cadence ORCAD, OriginLab, Eclipse, Visual Studio
- A passionate and adventurous explore in both science and music. Enjoy cooperative efforts in creation and innovation.