Cheng Jin

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Education

- **University of Electronic Science and Technology of China** *Optoelectronic Information*   B.Eng
  2018.09 – 2022.06(Estimated)

  - Engineering Math(91), Mathematics Experiment(92), Signals and Systems(86), Application and Design of Digital Logic(85), Advanced Programming Language(90), Novel Optical imaging(88), Electrical Assembly Practice(92) etc.

Skills

- **Languages**: Python, MATLAB, LaTeX

- **Packages**: NumPy, pandas, scikit-learn, PyTorch, TensorFlow

Internship

- **Strategic Explorations Limited**   *Artificial Intelligence R&D Engineer*   2020.06 – 2020.08

  - Self-developed IPNN(Iterative Pansharpening Neural Network) structure used in pansharpening, whose accuracy achieves 94.38%.

Awards

- **Volunteer Activity of the 13th ICPA Conference**   *Outstanding Volunteer*   2020.01
- **the 19th UESTC Mathematical Modelling Contest**   *Third Price*   2019.06
- **2019 UESTC English Dubbing Competition**   *Honorable Mention Winner*   2019.06
- **Outstanding Student at Elite Class of Optoelectronic School(5.2%)**   *Second Category* 2019.11
- **2019 UESTC Summer Social Practice**   *Outstanding Individual*   2019.12
- **2020 Mathematical Contest in Modeling(MCM)**   *Successful Participant*   2020.01

Commissions of Trust

- **UESTC Applied Electronics Association**   *Member*   2018.09 – 2019.06
- **UESTC Ingress Club**   *President*   2019.09 – 2020.06
- **Reviewer for**   *IEEE Transactions on Geoscience and Remote Sensing*   Since 2020.07
- **Reviewer for**   *IEEE Geoscience and Remote Sensing Letters*   Since 2020.08

Certificates

- **College English Test(CET)**   *CET-4 (635), CET-6 (657)*   2018.12 – 2019.06
- **TOEFL**   *108*   2019.10
- **CRAC Amateur Raido Operation Licence**   *A Category*   2020.09

Research Projects

- **UCB Innovation and Leadership Winter Program** *Skill Development* 2019.01 − 2019.02
    - Project Attribute：Study Abroad - Exchange Program
    - Project Introduction: The program is based on the Robertson Leadership Center and is designed to strengthen the application of leadership in practice. The program is closely focused on the theme of innovation and leadership, with a focus on fostering a sense of innovation, cross-cultural communication, teamwork and team leadership skills.
    - Project Accomplishment: Completed all requirements of the program and received a certificate of completion.

- **Volunteer Teaching Activities in Ganzir Village** *Social Practice* 2019.07
    - Project Attribute：Public Welfare
    - Project Introduction: This project is the mission of the "Bees' Home" volunteer teaching team from the School of Optoelectronics Science and Engineering of the University of Electronic Science and Technology. The team went to Dashuitang community in Ganzir Village, Liangshan Yi Autonomous Prefecture, Xichang City, Sichuan Province (a poverty-stricken area) for a one-month teaching period. The subjects taught were Chinese, mathematics, English, science and art to a group of students ranging from third grade to the ninth grade.
    - Project Accomplishment: Warm-welcomed by the local residents, the volunteer teaching team was interviewed on the local Liangshan TV station and successfully completed the corresponding teaching assignment.

- **Research of Pansharpening Satellite Images** *Computer Vision* 2019.10 − 2020.2
    - Project Attribute：UESTC Scientific Research Training Program
    - Development Environment: Python, TensorFlow
    - Project Introduction: This project fuses the high-resolution panchromatic map captured by the WorldView-3, Gaofen-2 satellite sensor with the low-resolution multispectral map through a convolutional neural network to obtain high-resolution multispectral images.
    - Project Accomplishment: Utilized TensorFlow Framework in Python to create a 5-layer Laplacian Pyramid Convolutional Neural Network(CNN), which includes several Modulation Transfer Function(MTF)-generated convolutional kernels. Both visual performance and quality indexes are the best among recent literature.(Up to Sept. of 2020)

- **Brain-like Computation Simulation** *Material Science/Software Engineering* 2019.12 − 2020.12
    - Project Attribute：UESTC Scientific Research Training Program
    - Development Environment: *Software*: Python, PyTorch; *Hardware and Material*: Graphene, TMDCs(Transition Metal Dichalcogenide) and Experimental Instruments Provided by UESTC Optoelectronic Laboratory
    - Project Introduction: In this project, a corresponding two-dimensional device was designed and fabricated to realize the artificial simulation of biological synapses, including the short-term plasticity, long-term plasticity, and double-pulse dissimulation of synapses, and a corresponding simulation program was written.
    - Project Accomplishment: The simulation software designed by our team is able to simulate the conductive properties of two-dimensional materials under various parameters well within the error tolerance, which saves the cost of manufacturing two-dimensional material measurements, and simulates the long- and short-term plasticity and double-pulse dissimilarity of biological synapses well.