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Professional Profile

An innovative cs-major undergraduate with an academic rigor spanning four countries, a solid coding skillset of Python, C++, JavaScript, and a knack for devising robust AI solutions through cooperative team dynamics. Able to leverage a heavy dose of deep learning with data analytics, and a healthy sense of exploration and collaboration. Aspire to contribute to the cutting edge of computer science research and application with an unyielding curiosity and a collaborative spirit.

Education

University of California Berkeley, US – One-Year Exchange Student at EECS@UCB

Ongoing since 08/2023

 Selected Courses (17 credits): CS61C Machine Structures, CS161 Computer Security, CS198-008 Linux, CS198-078 Blockchain, CS198-126 Deep Learning, CS198-750 Building Apps in Web/iOS

Dalian University of Technology, China – Bachelor of Computer Science and Technology

Ongoing since 08/2020

- Average Score: 91/100
- Major Courses: Data Structures and Algorithms, Computer Principle, Computer Architecture, Compiler, Operating System, Database System, Computer Network, Software Engineering
- Math Courses: Engineering Math, Probabilistic and Statistics, Complex Function, Discrete Math
- Circuit Courses: Digital Logic, Analog Electronic Circuit, Circuit Experiment, Electronic Innovation

University of Oxford, UK - One-Month Summer Programme Student at LMH@OXFORD

07/2023 - 08/2023

- Selected Course (4 credits): AI & ML Advanced Applications of Neural Network, Deep Learning
- Seminars: Deep Reinforcement Learning (@UCB), Machine Learning with Graphics (@Stanford)

Technical University of Munich, Germany – One-Semester Exchange Student at Informatik@TUM

10/2022 - 02/2023

- Selected Course (5 credits): Techniques in AI
- Seminars: TUM Data Innovation Lab (@Amazon), TUM Robotics (@BMW), TUM Internet Lab

Projects

Beam Prediction Based on Multi-Modal Fusion | Undergraduate Thesis | DUT, China

Ongoing since 01/2023

Supervisor: Prof. Xuanheng Li, DUT Associate Professor of School of Information and Communication

• Worked directly under supervision of Prof. Xuanheng Li, to propose a povel and effective solution

- Worked directly under supervision of Prof. Xuanheng Li, to propose a novel and effective solution
 of proactive beamforming scheme that integrates multi-modal sensing and communication via
 Deep Residual Network (ResNet) and transformer; our network obtained real-world comprehensive
 environmental features on DeepSense6G Dataset, and achieved >97.55% Top-5 ACC for prediction.
- Designed, trained, evaluated, and tuned uni- and multi- modal RetNet and transformer using Python.
- Coded, tested, debugged, implemented MultipleWeatherTranslationGAN.py to enlarge rgb dataset.
- In-progress drafting to publish a top Journal for the project.

UAV Based ML Aided Integrated Sensing and Communication | Research Project | DUT, China

12/2021 - 12/2022

Supervisor: Prof. Xuanheng Li, DUT Associate Professor of School of Information and Communication

- Worked directly under supervision of Prof. Xuanheng Li, to develop a powerful and integrated ISAC platform (Communication: OFDM, Radar: FMCW) on the portable Pluto-SDR (SW Defined Radio); then utilized it as the platform for our proposed DQLearning-Framed Intelligent Drone Deployment.
- Ended up with a patent and awarded as National-Level in Nationwide College Innovation Program.

Air-Ground Coordinated Autonomous Aerial Inspection Robot | Research Project | DUT, China

07/2022 - 09/2022

Supervisor: Prof. Heng Qi, DUT Dean Assistant for Faculty of Electronic Information and Electrical Engineering

- Worked directly under supervision of professor to successfully build up an aerial inspection robot ended up uploading ground infrastructure's fault images to protect workers from potential danger.
- Programmed Inspection Path Planning in high-dimen constraint space, using C++, via RRT* algorithm.
- Programmed Intelligent Perception Obstacle Avoidance and Trajectory Prediction using Py, via NNs.
- Programmed Power Target Monitoring and Early Warning using C++, via YOLO5.

Supervisor: Prof. Hongkai Wang, DUT Associate Dean of Faculty of Medicine, Professor of School of Biomedical Engineering

Worked directly under supervision of Prof. Hongkai Wang, to research on manual image processing
for trachea image segmentation, utilizing MITK Software; then designed, trained, evaluated, tuned a
well-programmed nnUNet to successfully realize trachea image segmentation without manual op
to end up with 3D-printed physical models of segmented trachea deriving from our nnUNet.

Skills and Tools

- C, C++, Java, Python, JavaScript, Verilog HDL (logisim)
- Git, VSCode, Jmeter, Testbed, Loadrunner
- CGAL, OpenMesh, VTK, ECharts

- PyCharm, PyTorch, TensorFlow
- HTML, D3.js, Tableau, NoSQL data stores (MongoDB)
- MySQL, Big Table, MapReduce, Mahout, Hadoop

Experience

Baidu Apollo Autonomous Driving Project at Institute of Software Chinese Academy of Sciences (ISCAS) Beijing, China Summer Intern 06/2023 - 07/2023

Supervisor: Dr. Lingzhong Meng, ISCAS Researcher

- Worked closely with various teams at Integration Center, ISCAS, to propose a comprehensive solution for Baidu Apollo Autonomous Driving Project, linking functionalities of bottom layers, software usage, and date learning, etc., to connect the entire autonomous driving workflow.
- Coded, tested, debugged, implemented and documented the two modules using C++ and Python.
- Utilized Protobuf for HDMap Module, to read high-precision maps in Opendrive format, build up KDTree storing map data, implement the functionality of finding the road and subsequent nodes based on the entered starting point coordinates; lastly visualizing results via PCL, Qt, Vtk, OpenCV.
- Utilized Apollo's built-in tools of Dreamview (Apollo6.0) and OSM (Apollo3.0) for Routing Module, to successfully implement such two methods of visualizing the system's expected routing functions.

Al-driven Legal Supervision System for Protection of Minors at Local People's Procuratorate Semester Intern

Dalian, China 04/2023 - 06/2023

Supervisor: Prof. Xianneng Li, DUT Associate Dean of School of Economics and Management

- Worked closely with another team from School of Economics and Management, to develop a fullstack legal supervision system for Minors Protection in Dalian City, linking front-end portals, backend data processing, to provide intelligent analysis and judgement HTMLs from views of tech and legi.
- Coded, tested, debugged, implemented and documented the front-end multi-modal data collection portal, the back-end data processing stack, and the final heat-map HTMLs using C++, Python, JS.
- Utilized Image Caption/OCR on images, Video Frame Interpolation on videos, LAS on audios to convert mountainous collected multi-modal data into text, in collaboration with management team.
- Utilized BERT, Naive Bayes, Keyword Multiclassification techniques on post-textual-processed data, to classify into 5 legi case types for management team's further refinement based on legal terms.
- Labeled collected datasets classified as case types as above with a corresponding protection type
 for each, then designed, trained, evaluated, and tuned a transformer model; such model was successfully utilized to take in new case descriptions to classify, label and lastly predict the protection type.
- Ended up with a patent (in progress) and a Second Runner-Up Award in Provincial Big Data Contest.

Honors and Awards

- 2022-2024 DUT International Communication Association Overseas Communication Center (role: Minister)
- 09/2022 DUT Model Student of Academic Records, Model Student of Science and Innovation (awarded Scholarship)
- 09/2022 China Modeling Award (2‰ nationwide, leader), 02/2022 International Modeling Award (1% globally, leader)

Sports and Volunteer

- Swimming, Hiking, Kayaking, Sailing, Surfing, and UC Berkeley Inclusive Recreation Adaptive Sports Wheelchair Rugby
- Nov 14-17, 2023, Volunteer for 2023 San Francisco APEC Economic Leaders' Week (honored by Berkeley CSA)
- Nov 3-4, 2023, Volunteer for 50th Annual UC Berkeley Open (honored by Berkeley Martial Arts Program)