Jonathan Hans Soeseno

AI Research Engineer

Jonathan is a research engineer from Inventec Corp., a world-leading computer and electronics manufacturer with annual revenue of more than 16 billion USD. At Inventec AI Center, he focuses on improving the company's manufacturing processes and pushing its technological advancements through deep learning algorithms.

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WORK EXPERIENCE

AI Research Engineer
Inventec Corp (英業達集團).

02/2019 - Present   *Taipei, Taiwan*

Summary

- Design transition motion tensor to enable versatile and controllable virtual character (Accepted to SIGGRAPH Asia 2021 Technical Communications.)
- Work on realistic locomotion controller for quadrupeds through combining Deep RL and GAN (Accepted to SIGGRAPH 2020.)
- Won first place of USAID intelligent forecasting competition 2020.
- Develop a machine-learning algorithm for self-monitoring blood pressure measurement through ECG and PPG signals.
- Implement an order forecasting system using a deep sequence model for inventory optimization (Accepted to APSIPA 2021.)
- 6+ issued and pending patents.

Deep Learning Engineer Intern
Industrial Technology Research Institute (工業技術研究院)

07/2018 - 09/2018   *Zhudong, Taiwan*

Summary

- Designed a pipeline to clean, preprocess, encode, and decode MIDI files for neural networks.
- Developed MAC- Net: to compose a melody and an accompaniment using LSTM as the backbone.

EDUCATION

Computer Science (M.Sc)
National Taiwan University of Science and Technology (NTUST)

02/2017 - 01/2019   *Taipei, Taiwan - GPA (4.19/4.3)*

Summary

- Worked on facial attribute transformation for humans using generative adversarial networks (GAN).
- Thesis: Controllable and Identity-Aware Facial Attribute Transformation using Generative Adversarial Networks.
- Submitted 2 publications (IEEE Access, IEEE TCYB).
- Best Master Thesis Award IICM 2019.

Computer Science (B.Sc)
Petra Christian University

08/2013 - 02/2017   *Surabaya, Indonesia - GPA (3.94/4.0)*

Summary

- Participated in Cisco Networking Academy 2016 NetRiders CCENT ranked 8th in APACJ and 3rd in Indonesia.
- Final project: OCR for Indonesia's National ID card using traditional computer vision, image processing, and SVM.

SKILLS

Python | Java | C# | C++ | PyTorch

TensorFlow | Keras | Pandas | Data Science

Computer Vision | Image Processing

Computer Networking | OpenGL

PUBLICATIONS

Transition Motion Tensor: A Data-Driven Approach for Versatile and Controllable Agents in Physically Simulated Environments - SIGGRAPH Asia 2021 Technical Communication
Jonathan Hans Soeseno*, Ying-Sheng Luo*, Trista Pei-Chun Chen, and Wei-Chao Chen (*joint first authors)

Controllable and Identity-Aware Facial Attribute Transformation - IEEE TCYB 2021
Daniel Stanley Tan*, Jonathan Hans Soeseno* , and Kai-Lung Hua (*joint first authors)

Demystifying Data and AI for Manufacturing: Case Studies from a Major Computer Maker - APSIPA 2021
Yi-Chun Chen, Bo-Huei He, Shih-Sung Lin, Jonathan Hans Soeseno, Daniel Stanley Tan, Trista Pei-Chun Chen, and Wei-Chao Chen

CARL: Controllable Agent with Reinforcement Learning for Quadruped Locomotion - SIGGRAPH 2020
Ying-Sheng Luo*, Jonathan Hans Soeseno*, Trista Pei-Chun Chen, Wei-Chao Chen (*joint first authors)

Faster, Smaller, and Simpler Model for Multiple Facial Attributes Transformation - IEEE Access 2019
Jonathan Hans Soeseno, Daniel Stanley Tan, Wen-Yin Chen, Kai-Lung Hua

LANGUAGES

Bahasa Indonesia   ●●●●●

English   ●●●●●

Chinese Traditional   ●●●○○

INTERESTS

Computer Graphics | Physics-based Controller

Character Animation | Generative Modeling

Time-Series Forecasting | Computer Vision

Image Processing | Data Science | Deep Learning