

Puntawat Ponglertnapakorn

PhD Candidate at Vidyasirimedhi Institute of Science and Technology (VISTEC)

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Education

Aug 2019 - Present **PhD Candidate in Information Science and Technology**
Vidyasirimedhi Institute of Science and Technology (VISTEC)
Rayong, Thailand
Advisor: Professor Supasorn Suwajanakorn

Aug 2014 - May 2018 **BSc in Computer Engineering (Second Class Honors)**
Prince of Songkhla University
Songkhla, Thailand

Experience

Nov 2018 - Jul 2019 **Research Assistant at Brain Lab**
Vidyasirimedhi Institute of Science and Technology
Rayong, Thailand

- ❖ Worked in the Sleep and MUSEC team
- ❖ Collected human biosignal data (e.g., ECG, EEG, and PPG).
- ❖ Developed a post-calibration algorithm to improve heart rate estimation on consumer grade wrist-worn devices.

Aug 2016 - Nov 2016 **Student Internship at NETPIE**
Thailand's National Electronics and Computer Technology Center (NECTEC)
Thailand Science Park, Pathum Thani, Thailand

- ❖ Developed checksum and optimized memory usage in Microgear library for ESP8266.
- ❖ Workshop's instructor at EGAT and NECTEC.

Research Interest

Broad interests: Computer Vision, Machine Learning, Deep Learning, Generative Modeling

Specific interests: Human Motion Generation for Football Players, Computer Vision for Sports Virtual Replay and Reconstruction, Face Relighting

Publications

- Where Is The Ball: 3D Ball Trajectory Estimation From 2D Monocular Tracking**
11th CVSPORTS at CVPR 2025 · [Project Page](#) · [Paper](#)
“An approach for 3D ball trajectory estimation from a 2D tracking sequence that generalizes to real-world trajectories, despite being trained solely on simulation.”
P. Ponglertnapakorn, S. Suwajanakorn
With support and collaboration from Dr.Konstantinos Rematas
- DiFaReli++: Diffusion Face Relighting with Consistent Cast Shadows**
Arxiv preprint 2025 · [Project Page](#) · [Paper](#)
“An extension to DiFaReli that improves cast shadows by enabling removal or alteration of hard cast shadows with temporal consistency, and achieves faster relighting in a single network pass.”
P. Ponglertnapakorn, N. Tritrong, S. Suwajanakorn.
- DiFaReli: Diffusion Face Relighting**
ICCV 2023 · [Project Page](#) · [Paper](#)
“A novel approach to single-view face relighting in the wild leveraging a conditional diffusion implicit model (DDIM) without any need for light stage data, multi-view images, or lighting ground truth.”
P. Ponglertnapakorn, N. Tritrong, S. Suwajanakorn.

4. **Revealing Preference in Popular Music Through Familiarity and Brain Response**
IEEE Sensor Journal 2021 · [Dataset](#) · [Paper](#)
“A music preference study, factorized by familiarity score and brain responses (EEG) while listening to music with and without lyrics.”
S. Sangnark, P. Autthasan, **P. Ponglertnapakorn**, Phudit Chalekarn, T. Sudhawiyangkul, M. Trakulruangroj, S. Songsermsawad, R. Assabumrungrat, S. Amplod, K. Ounjai, T. Wilaiprasitporn
 5. **Improving Heart Rate Estimation on Consumer Grade Wrist-Worn Device Using Post-Calibration Approach, IEEE Sensor Journal 2020** · [Paper](#)
“A method to improve heart rate estimation from various consumer-grade wrist-worn devices toward medical-grade accuracy.”
T. Choksatchawathi, **P. Ponglertnapakorn**, A. Ditthapron, P. Leelaarporn, T. Wisutthisen, T. Wilaiprasitporn
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Awards and Scholarships

1. Ph.D. fully-funded scholarship issued by Siam Commercial Bank Public Company Limited (SCB) and PTT Public Company Limited. (2019)
 2. First place in Thailand Southern Programming Contest (2016)
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