Chi Bach Pham

Master of Engineering Science Student

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Area of Interest

- **Programming**
- **Optimization • Algorithm**
- **Numerical method**
- **Machine learning**

Skills

PROGRAMMING

Proficient:
C • C++ • Python • MATLAB
Experienced:
R • LaTeX • Javascript • Julia
Familiar:
Batch • MIPS • Arduino • VHDL

LIBRARIES/FRAMEWORKS

PyTorch • CVXR • CVXPY
Tensorflow • Mosek

TOOLS/PLATFORMS

Git • Arduino • FPGA

Education

MONASH UNIVERSITY

Master of Engineering Science (Research)
Jan 2022 - Present | Melbourne, VIC
Department of Electrical and Computer System
Supervisor: Dr. James Saunderson
Co-Supervisor: Dr. Wynita Griggs

MONASH UNIVERSITY

Bachelor of Engineering (Honours)
Jul 2017 - Dec 2021 | Melbourne, VIC
Department of Electrical and Computer System
Final Course Grade: H2A

References

Dr. James Saunderson
Supervisor, Monash University
James.Saunderson@monash.edu

Dr. Wynita Griggs
Co-Supervisor, Monash University
Wynita.Griggs@monash.edu

Msc. Đắc Phương Hồ
Supervisor, HUS HSGS
phuonghd@vnu.edu.vn

Experience

MONASH UNIVERSITY | Teaching Associate

Feb 2022 – Present | Melbourne, Australia

- ➔ Lab demonstrator for ECE3073 Computer Systems. Instruct students with FPGA, Verilog HDL, assembly and C.
- ➔ Lab demonstrator for ECE2071 Computer Organization and Programming. Instruct students with C, PLC and MIPS.

HIGH SCHOOL FOR GIFTED STUDENT OF SCIENCE | Teaching Associate

Jun 2020 – Aug 2020 | Hanoi, Vietnam

- ➔ Taught machine learning using Python and Pytorch library. In preparation for their Hackathon competition on reflex ball boxing hit counting
- ➔ Assist in organizing the event.

HIGH SCHOOL FOR GIFTED STUDENT OF SCIENCE | Teaching Associate

Jun 2016 – Aug 2016 | Hanoi, Vietnam

- ➔ Taught computer science algorithm for competitive programming in C/C++ for 10th grader in prepare for the school competition.

Projects

GAUSSIAN MAXIMUM LIKELIHOOD ESTIMATION PARSER | R, CVXR

2021| Monash University, Australia

- ➔ In collaboration with Dr James Saunderson, Monash University.
- ➔ Develop a parser to solve the MLE problem for p-dimensional Gaussian models with convex constraints on the covariance matrix. Using Gaussian quadrature rule with semi-definite approximation.
- ➔ Code available at: SP-GMLE.

GAUSSIAN MAXIMUM LIKELIHOOD ESTIMATION PARSER | Python, CVXPY

2021| Monash University, Australia

- ➔ Final year project at Monash University under Dr James Saunderson supervision.
- ➔ Develop a parser to solve the MLE problem for p-dimensional Gaussian models with convex constraints on the covariance matrix. Using hyperplane approximation.
- ➔ Code available at: LinGaussCov.

PUCK STACKING ROBOT |PSoC, CAD

2019| Monash University, Australia

- ➔ Academic project for ECE3091 at Monash University.
- ➔ Build and program a robot using PSoC controller to locate, pick up and stack the colored puck in predifined order.
- ➔ Contribute in developing the color sensing system for the robot as well as CAD design and mechanical movement of the robot arms.