








Christabella Irwanto

 github.com/christabella •  bella.cc •  bella.cc/blog •  linkedin.com/in/cirwanto
 christabella.irwanto@gmail.com •  Finland •  +358 0417172713

A computer scientist and software engineer by training, I am currently pursuing graduate studies in machine learning. At the university, I am taking a breadth of courses to build a strong foundation, and exploring potential areas of specialization. I strive for thoughtful design, effective communication, elegant code, teamwork, and impact.

EDUCATION

- Sep 2018 - Present **Aalto University, Finland**
Master of Science in Machine Learning, Data Science and Artificial Intelligence (Macadamia)
- Coursework includes data mining, stochastic modelling, Bayesian analysis, and reinforcement learning.
- Conducting research in the privacy implications of adversarially trained deep learning models.
- May 2018 **PRAIRIE Artificial Intelligence Summer School (PAISS) by Inria and NAVER LABS, France**
Attended practical sessions and lectures by renowned experts in different areas of artificial intelligence.
- May 2014 - Aug 2017 **Singapore University of Technology and Design (SUTD), Singapore**
Bachelor of Engineering in Info Systems Technology and Design; specialisation in Artificial Intelligence
SUTD-MIT Global Leadership Programme Scholarship
- Summer Exchange at **Massachusetts Institute of Technology, United States (May - Aug '15)**
- Semester Exchange at **KTH Royal Institute of Technology, Sweden (Aug '16 - Jan '17)**
- Took master's courses including Advanced ML, Advanced Algorithms, AI, and Computer Vision.

WORK EXPERIENCE

- Sep 2017 - Aug 2018 **Carousell, Software Engineer, Singapore • 1 yr**
- During my time in advertising, the team doubled in size and became the dominant source of revenue.
- Built up a scalable advertising microservice with Go, PostgreSQL, Redis, RabbitMQ, Protobuf, and Docker.
- Developed features for a React web app in JavaScript, and for the core back-end Django service in Python.
- Delivered a big data processing Dataflow pipeline in Java, a mobile feature in React Native, and a tool to generate and visualize neural network embeddings with TensorFlow's Embedding Projector in Python.
- Learnt best practices for Scrum, code review, testing, continuous delivery, and deployment.
- May 2016 - July 2016 **Traveloka, Software Engineering Intern, Jakarta • 3 mos.**
Fully built and shipped two internal tools with Java, Apache Velocity, Play, MongoDB, AWS, and JavaScript.
- Jun 2015 - May 2016 **(these)abilities, Co-founder and Head of Software Development, Singapore • 1 yr**
Used computer vision to segment keyboards; Built website, blog, and forum app for disability communities.

PROJECTS

- 2018 **Deep learning for molecular graphs, Artificial Intelligence in Health Technologies, Aalto University**
Predicting solubility of drug compounds from molecular graphs with deep learning techniques in Python.
- 2018 **Q-learning on Cartpole and LunarLander, Reinforcement Learning, Aalto University**
Implemented Q-learning with radial basis functions and stochastic gradient descent in OpenAI gym.
- 2018 **Music genre classification, Machine Learning Basic Principles, Aalto University**
Implemented and evaluated ML models with scikit-learn and TensorFlow for Kaggle competition.
- 2017 **Inventory demand forecasting dashboard for Singapore Airlines, Final Project, SUTD**
Wrote Vue.js frontend and Phoenix API; built data processing and modelling pipeline in R and Python.
- 2017 **Geospatial research tooling, Spatial Networks Research Lab, SUTD**
Worked on a JavaScript API, Vue.js UI, and provisioning of Elasticsearch clusters with Terraform.
- 2016 **Prime Factorization Project, Advanced Algorithms, KTH**
Implemented Eratosthenes Sieve, Pollard's rho, Fermat's method, and randomized variants in C++.
- 2016 **Reimplementation of Breiman's 'Random Forests' Paper, Advanced Machine Learning, KTH**
Implemented and analyzed decision tree classifier bagging technique from scratch in Python.

AWARDS AND HONOURS

- 2012-2018 **Various projects at 16 hackathons, 9 awards, various locations**
E.g. NLP-powered music video generator, Google Assistant skill, Alexa app, video chat web app, AR app.
- 2017 **Women Techmakers Scholars Program (Google Anita Borg Memorial Scholarship Program)**
One of 12 from Southeast Asia; attended 3-day professional and personal development retreat in Seoul.
- 2017 **Google Code Jam to I/O for Women**
Scored top 150 in global algorithmic programming contest; received funding to attend Google I/O 2017.

TECHNICAL SKILLS

	Proficient in:	Familiar with:
Languages	- Python, JavaScript, Go	- C/C++, Java, R, Shell, MATLAB, Emacs Lisp, Arduino
Tools	- Git, Emacs, scikit-learn	- TensorFlow, Keras, Vue.js, Django, Node.js, React
Topics	- Machine Learning, Algorithms, Unix, Full-stack Web Development	- Natural Language Processing, Computer Vision, Security, Web Accessibility

TEACHING

- 2018 **Introductory workshop to web accessibility (a11y)**, facilitator, JSConf.Asia 2018
- 2018 **Competitive programming workshop**, solo instructor, Google International Women's Day Student Summit
- 2017 **Competitive programming and unconscious bias busting**, main instructor, SUTD (University)
- 2016 **Design thinking and rapid prototyping for mobile accessibility**, main instructor, Grab Lab 8-workshop series
- 2015 **"Ethical Hacking"**, co-instructor, Dunman High School
- 2015 **"Programming with Scratch"**, co-instructor, The British Club
- 2014 **"Computer Studies"**, solo instructor, Raffles Institution

LANGUAGES

	Proficient	Conversational	Basic
Speaking	English	Chinese, Indonesian	Japanese