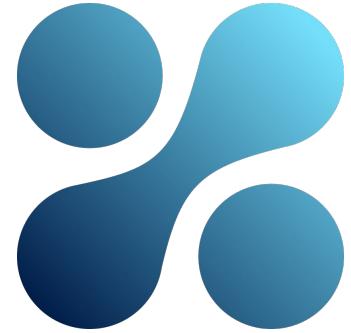




UNIVERSITAS
GADJAH MADA



Pengenalan Laboratorium Riset Algoritma dan Komputasi (AK)

*Muhammad Alfian Amrizal
(Kepala Lab AK)*



Ketua:

- Muhammad Alfian Amrizal, B.Eng., M.I.S., Ph.D.

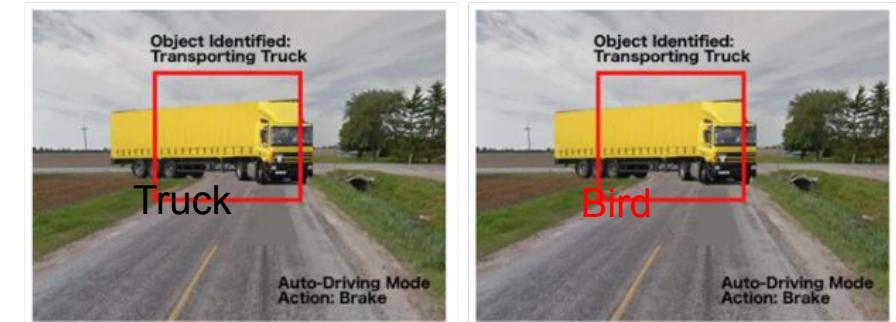
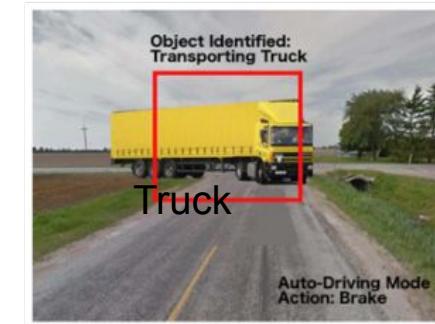
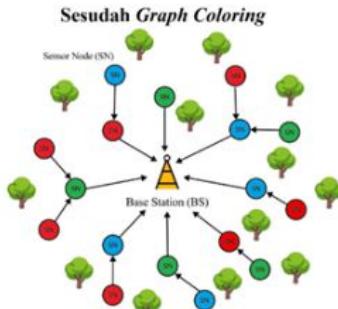
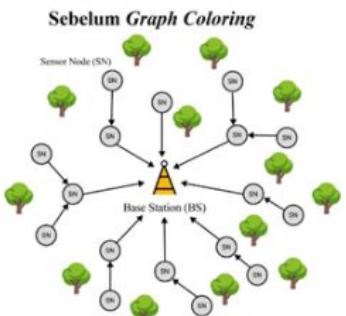
Anggota:

- Prof. Dr.-Ing. Mhd. Reza M. I. Pulungan, S.Si., M.Sc.
- Prof. Dr. Suprapto, M.I.Kom.
- Dr. Nur Rokhman, S.Si., M.Kom.
- Wahyono, S.Kom, Ph.D.
- Dr. Agus Sihabuddin, S.Si., M.Kom.
- Janoe Hendarto, Drs., M.I.Kom.
- Moh. Edi Wibowo,S.Kom., M.Kom, Ph.D.
- Faizal Makhrus, S.Kom., M.Sc., Ph.D.
- Erwin Eko Wahyudi, S.Kom., M.Cs.
- Novera Istiqomah, S.T., M.T., Ph.D.





- **Muhammad Alfian Amrizal, B.Eng., M.I.S., Ph.D.**
 - Jabatan : Lektor
 - Latar Belakang Pendidikan:
 - S2: Graduate School of Information Sciences, Tohoku University (2012-2014)
 - S3: Graduate School of Information Sciences, Tohoku University (2014-2017)
 - Topik:
 - High Performance Computing, Wireless Sensor Network, Reliable System/AI



Fault-free

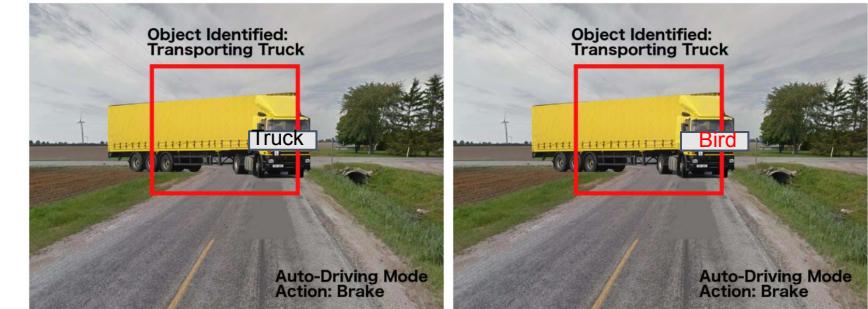
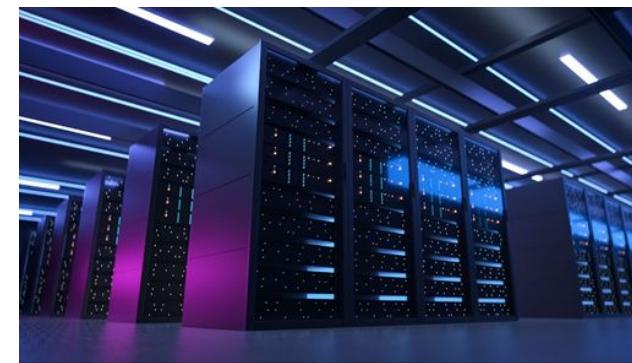
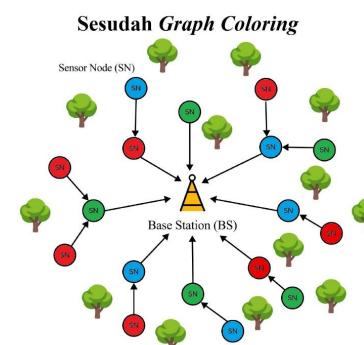
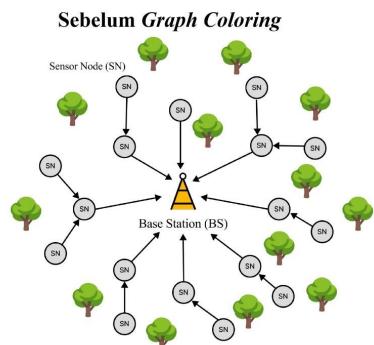
Truck is classified

Fault-ridden

Bird is classified instead



- **Muhammad Alfian Amrizal, B.Eng., M.I.S., Ph.D.**
 - Jabatan : Lektor
 - Latar Belakang Pendidikan:
 - S2: Graduate School of Information Sciences, Tohoku University (2012-2014)
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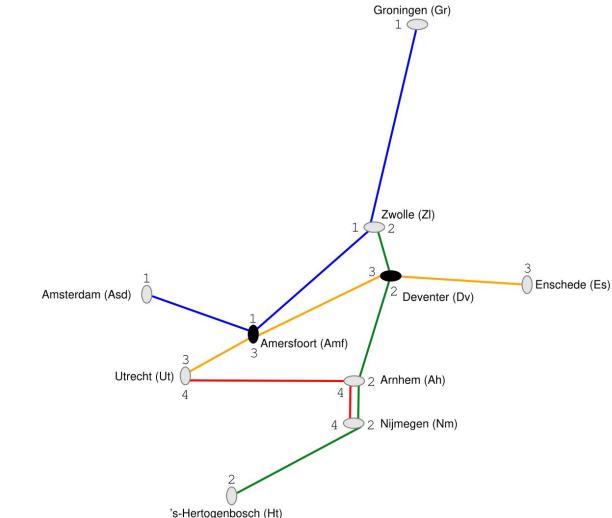
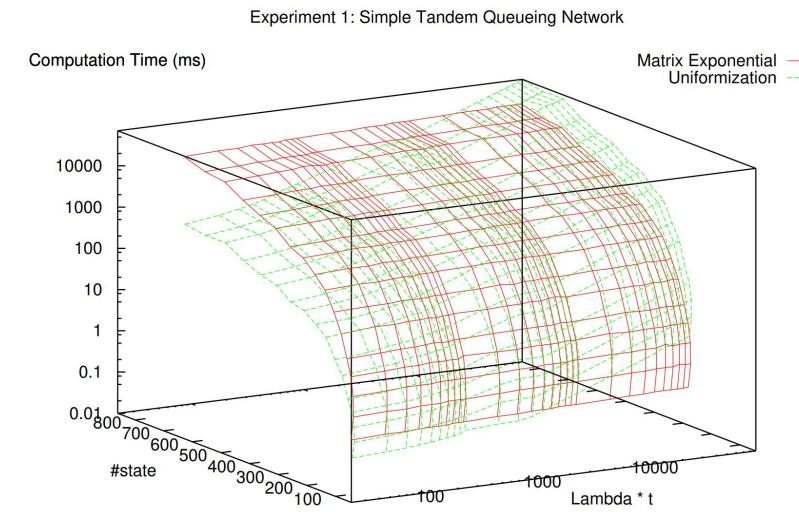
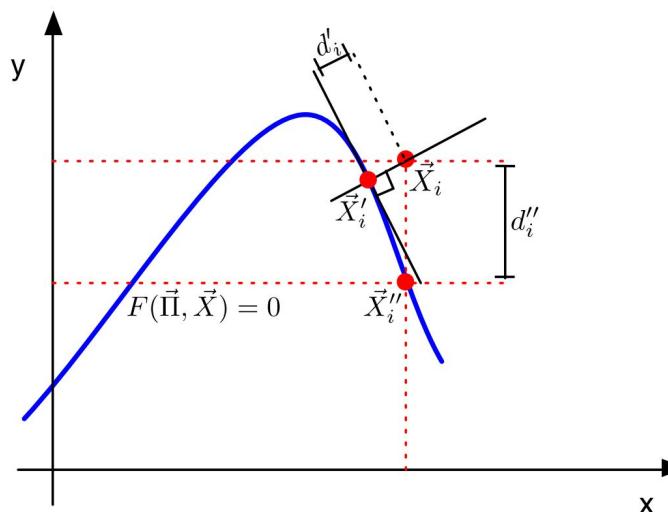


Fault-free
Truck is classified

Fault-ridden
Bird is classified instead



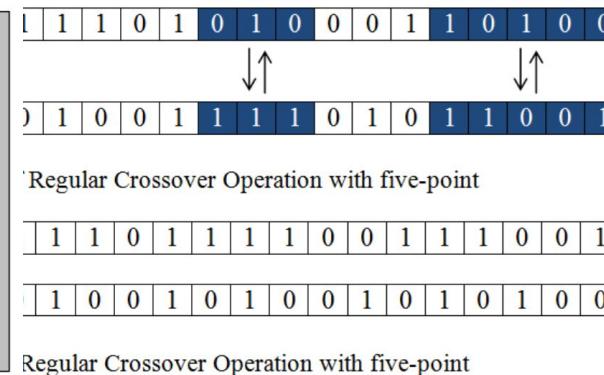
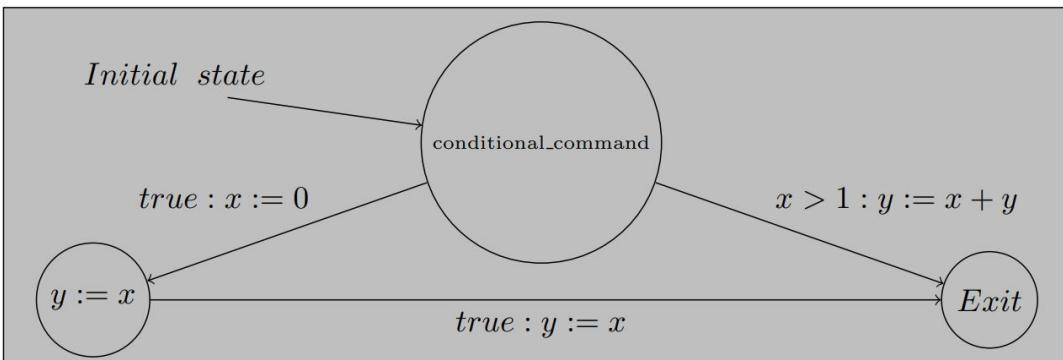
- **Prof. Dr.-Ing. Mhd. Reza M. I. Pulungan, S.Si., M.Sc.**
- Jabatan : Guru Besar
- Latar Belakang Pendidikan:
 - S2: University of Twente, Netherlands (2001-2004)
 - S3: Saarland University, Germany (2005-2009)
- Topik:
 - Probabilistic Verification





• Prof. Dr. Suprapto, M.I.Kom.

- Jabatan : Guru Besar
- Latar Belakang Pendidikan:
 - S2: Computer Science, University of Indonesia, Indonesia
 - S3: Computer Science, Universitas Gadjah Mada, Indonesia
- Topik:
 - Formal Method



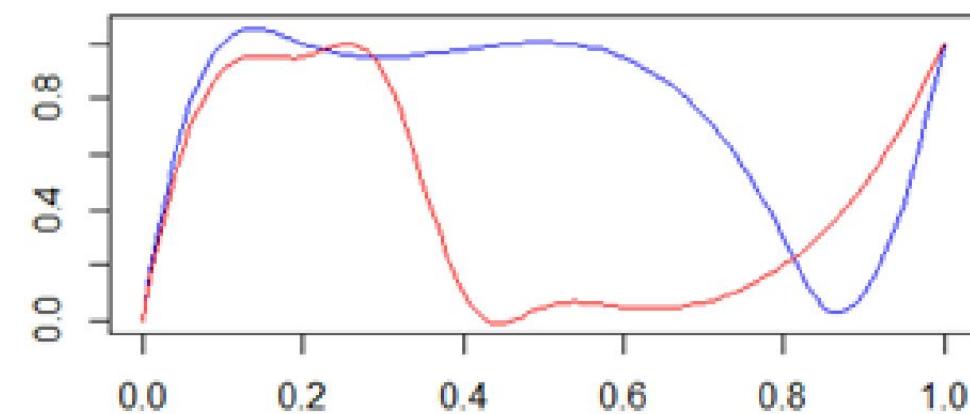
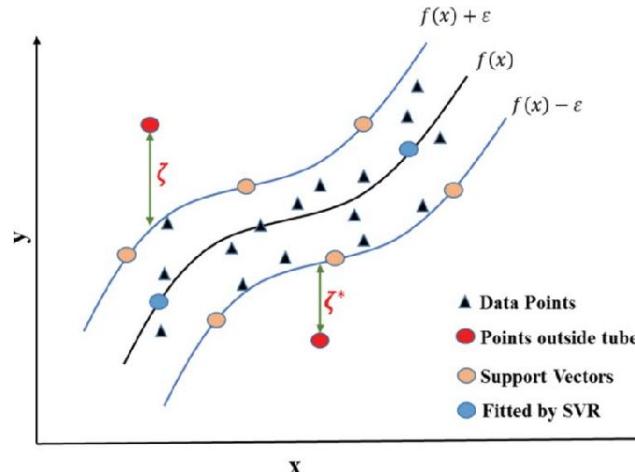
PROMELA	Java
proctype process(variable1 v1, variable2 v2, ...) { // statement of process }	class process extends Thread { variable1 v1; variable2 v2; ... public process(variable1 v1, variable2 v2,...) { this.v1 = v1; this.v2 = v2; } public void run(){ // statements of process } }
PROMELA (running)	Java (running)
run process(1, 2, 3,...);	new process(1, 2, 3, ...).start();



• Dr. Nur Rokhman, S.Si., M.Kom.

- Jabatan : Lektor Kepala
- Latar Belakang Pendidikan:
 - S2: MIPA, Universitas Gadjah Mada, Indonesia (2001-2004)
 - S3: Computer Science, MIPA, Universitas Gadjah Mada, Indonesia
- Topik:
 - Outlier Detection

No	Kode FKRTL	Keterangan	Alias Kolom / Variabel
1	FKL02	ID Kunjungan FKRTL	'id_kunjungan'
2	FKL03	Tanggal datang kunjungan FKRTL	'tgl_datang'
3	FKL04	Tanggal pulang kunjungan FKRTL	'tgl_pulang'
4	FKL07	Kepemilikan FKRTL	'kepemilikan_faskes'
5	FKL09	Tipe FKRTL	'tipe_faskes'
6	FKL10	Tingkat Pelayanan FKRTL	'tingkat_layanan'
7	FKL13	Kelas rawat peserta	'kelas_rawat'
8	FKL19	Kode INACBGs	'kode_inacbgss'
9	FKL20	INACBGs Kode Casemix Main Groups (CMG) (Digit ke-1) diabelikan dengan huruf alfabet (A to Z)	'cmg'
10	FKL23	INACBGs - Tingkat keparahan kelompok kasus (Digit ke-4)	'severity_level'
11	FKL31	Tarif regional INACBGs	'regional'
12	FKL32	Group Tarif INACBGs	'group_tarif'
13	FKL47	Biaya Tagih oleh fasilitas kesehatan	'biaya_tagih'
14	FKL48	Biaya Verifikasi BPJS Kesehatan setelah dilakukan verifikasi	'biaya_verifikasi'

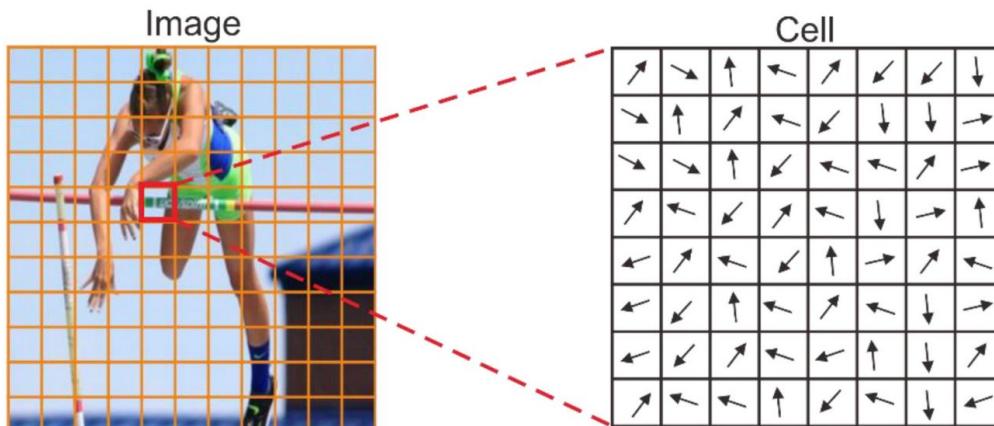




• Wahyono, S.Kom, Ph.D.



- Jabatan : Lektor Kepala
- Latar Belakang Pendidikan:
 - S2: University of Ulsan
 - S3: University of Ulsan
- Topik:
 - Vision-Based Intelligent Surveillance System, Video Analytic, Medical Image Processing and Analysis



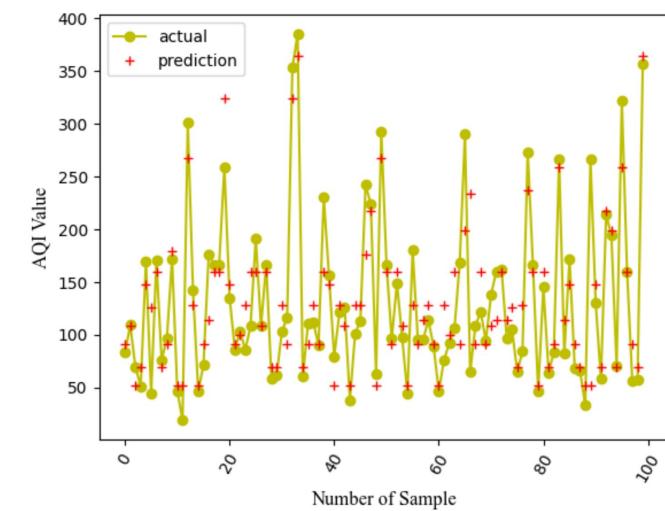
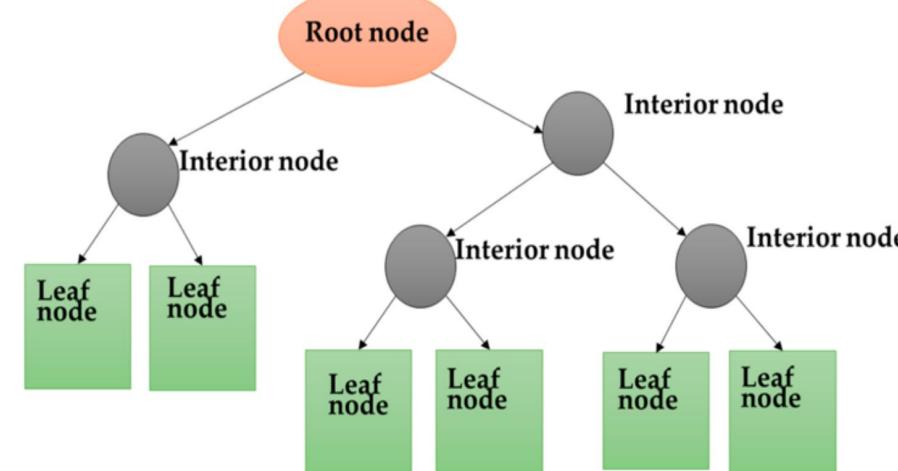
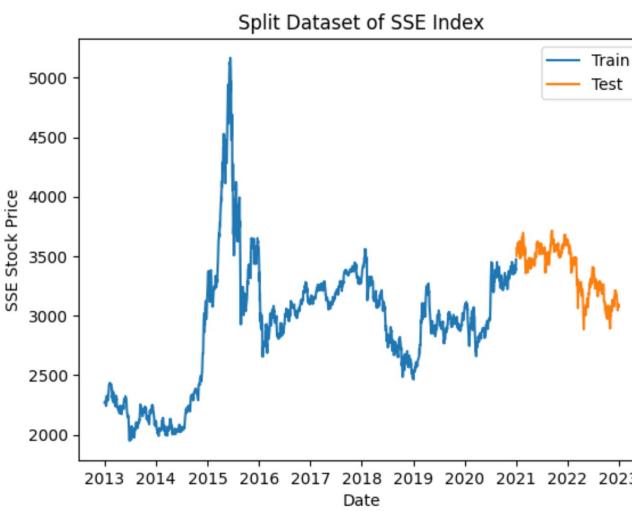
Name:	X	Gender:	Female
Symptoms:	Shortness of Breath and Chest Pain	Patient Type:	Disability
Exptl Sputum:	BTA Negative	Culture:	Negative
IGRA:	Negative	History of Tb:	Never Had Tb
TB Status:	New Diagnosis	Model:	7
Analysis Time:	02 Aug 2025, 13:23	Xpert MTB/RIF Or NAAT:	Positive



- **Dr. Agus Sihabuddin, S.Si., M.Kom.**



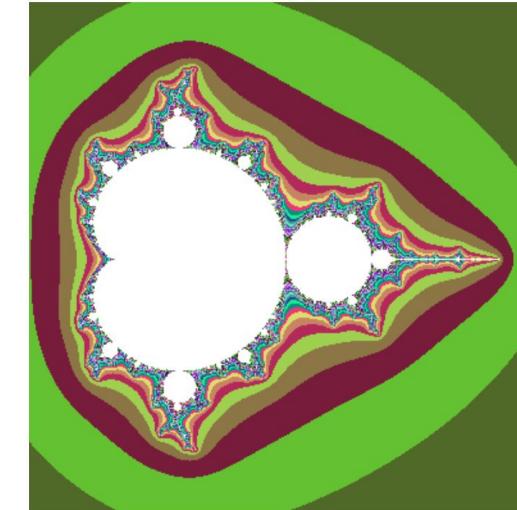
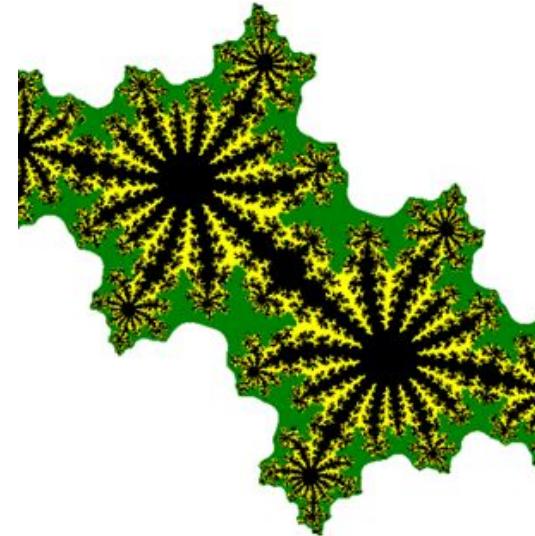
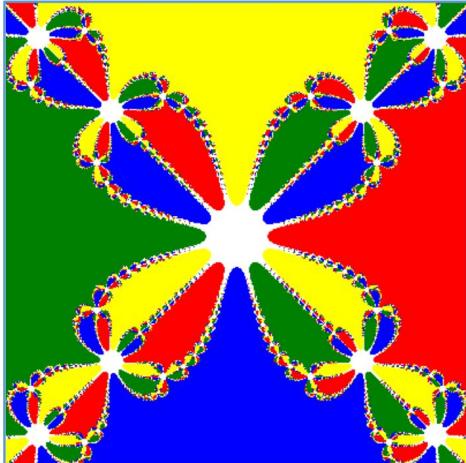
- Jabatan : Lektor Kepala
- Latar Belakang Pendidikan:
 - S2: Computer Science, Universitas Gadjah Mada, Indonesia, (2002-2004)
 - S3: Computer Science, Universitas Gadjah Mada, Indonesia, (2016)
- Topik:
 - Time Series Computation





- **Janoe Hendarto, Drs., M.I.Kom.**

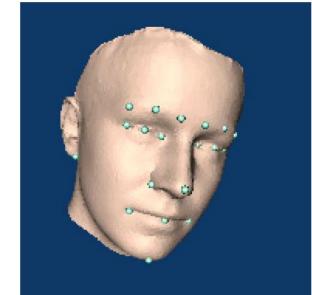
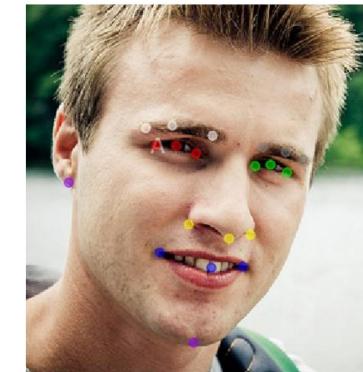
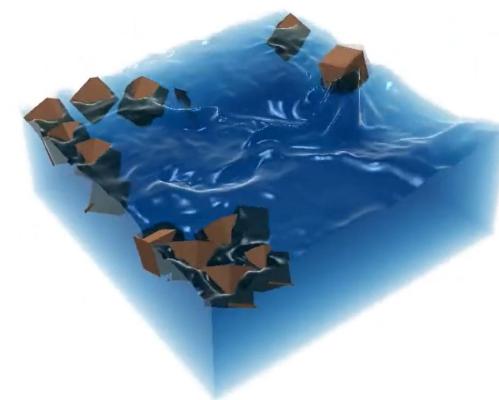
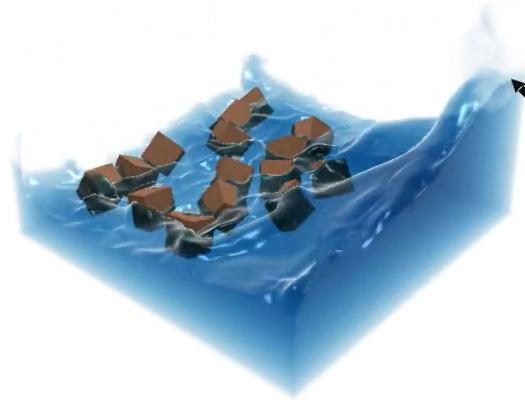
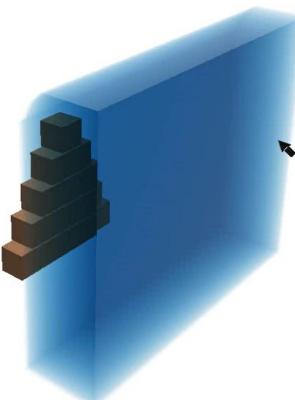
- Jabatan : Lektor
- Latar Belakang Pendidikan:
 - S2: Computer Science, Universitas Indonesia, Indonesia, (1989-1991)
- Topik:
 - Fractal Compression, Steganography, Encryption, and Stego-Crypto





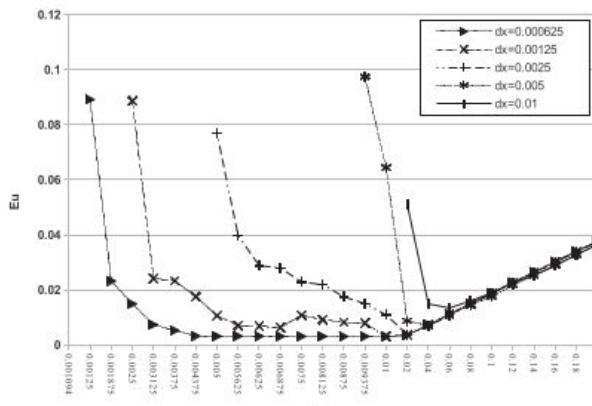
- **Moh. Edi Wibowo, S.Kom., M.Kom, Ph.D.**

- Jabatan : Lektor
- Latar Belakang Pendidikan:
 - S2: Computer Science, Gadjah Mada University, Indonesia (2006)
 - S3: Computer Vision and Pattern Recognition, Queensland University of Technology, Australia
- Topik:
 - AI Model Improvement/Adaptation, Computer Graphics

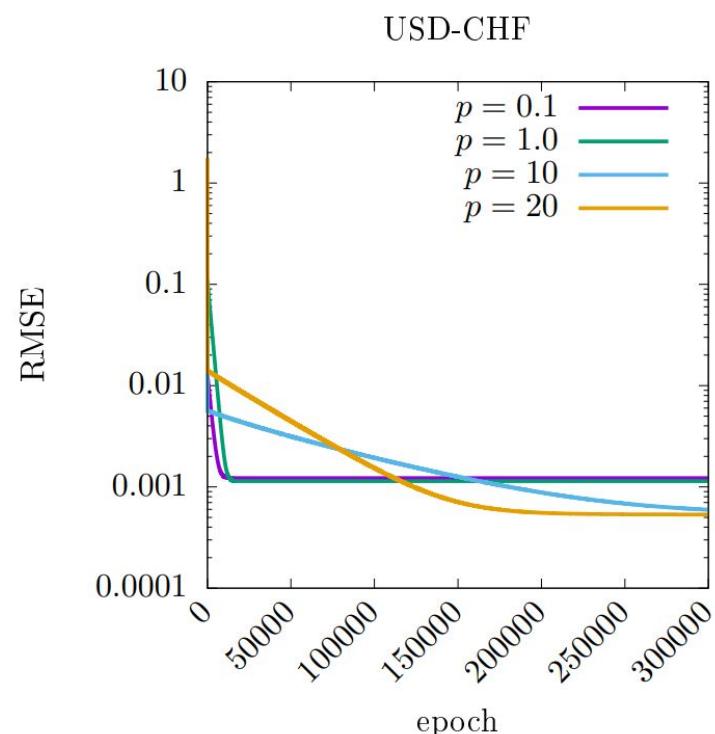
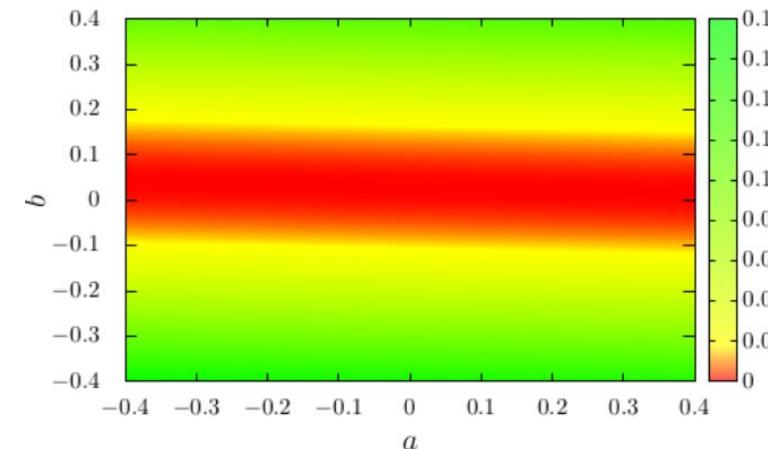




- **Faizal Makhrus, S.Kom., M.Sc., Ph.D.**
 - Jabatan : Lektor
 - Latar Belakang Pendidikan:
 - S2: Osmania University, India
 - S3: Kanazawa University, Japan
 - Topik:
 - Modelling and Optimization, Numerical Methods



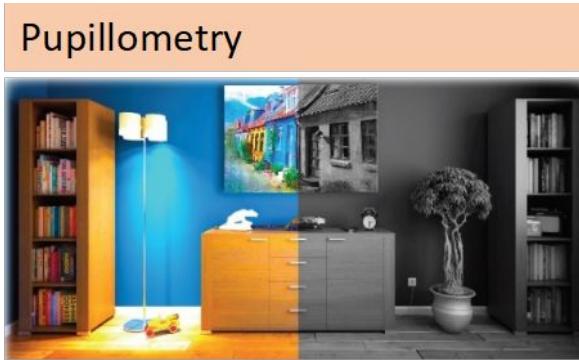
(c) E_u at time $\tau = 9$ in case 3





- **Novera Istiqomah, S.T., M.T., Ph.D.**

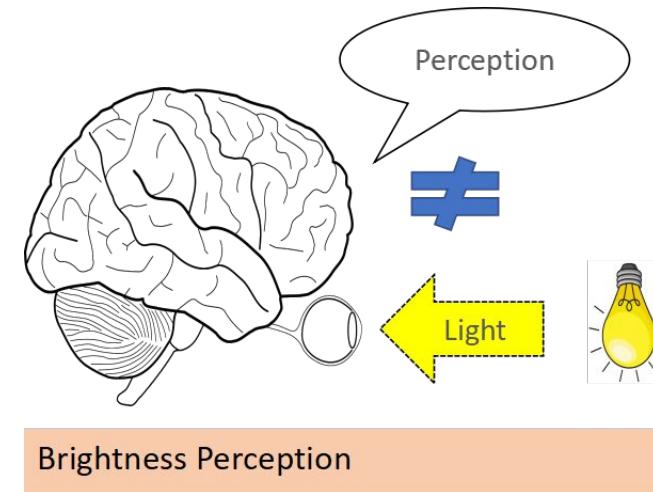
- Jabatan : Tenaga Pengajar
- Latar Belakang Pendidikan:
 - S2: Instrumentation and Control, Institut Teknologi Bandung (2015-2018)
 - S3: Computer Science and Engineering, Toyohashi University of Technology
- Topik:
 - Neuroscience Cognition, Intelligence Transport System, Oscillating Water Column



Constriction



Dilation



Optimasi lampu LL menggunakan simulator PTV Vissim.



- **Erwin Eko Wahyudi, S.Kom., M.Cs.**

- Jabatan : Lektor
- Latar Belakang Pendidikan:
 - S2: Computer Science, Universitas Gadjah Mada, Indonesia, (2017-2019)
- Topik:
 - Cryptography, Fully Homomorphic Encryption

Sedang studi S3 di University of Central Florida (USA)





UNIVERSITAS GADJAH MADA



Laboratorium Algoritma & Komputasi

algokom-ugm.github.io

Dari Teori ke Komputasi. Dari Algoritma ke Solusi