David Kurniadi Angdinata

Education

2016 onwards **MEng Mathematics and Computer Science (Pure Maths and Comp Logic)**, *Imperial College London*, United Kingdom.
First year: 83.2%, top course student, Faculty of Engineering Dean's List, G Research Ltd Prize

2014 to 2015 **Singapore GCE A-level**, *Temasek Junior College*, Singapore.
A in Mathematics, Physics, Chemistry, Project Work, Merit in NUS Modern Physics

2012 to 2013 **Singapore GCE O-level**, *Anderson Secondary School*, Singapore.
A in English, Chinese, Mathematics, Additional Mathematics, Physics, Chemistry, Geography

Employment

2018 to 2019 First year mathematics **undergraduate teaching assistant**. Weekly personal tutoring on discrete structures, logic, graphs and algorithms, and reasoning about programs.

2018 summer **Research project on elliptic curves**. Arithmetic of elliptic curves over finite fields and rational numbers with their applications in number theory and cryptography.

Projects

2018 autumn **Fuzzing user interface for *Hypothesis*** in Python.

2018 summer **Research project on finite projective planes**. Proved the existence and uniqueness of general planes and the non-existence or non-uniqueness of certain planes.

2018 spring **Improvements on *Pintos* operating system** in C. Improved synchronisation with thread schedulers, and implemented system calls for user programs. Group received 81%.

2017 autumn ***WACC* language to Assembly compiler** in Haskell. Parsed syntax/semantics with Alex/Happy, and used state monads for machine code generator. Group received 94%.

J P Morgan *Code for Good* hackathon. Redesigned elements of Nobel Prize website with a search engine. Front-end with Materialize CSS and back-end with Python.

2017 summer **MIDI file parser and mechanical music player**. Parsed MIDI music files into Raspberry Pi, played music on glockenspiel through robot arms. Group placed 4^{th}.

2017 spring **Imperial College *ICHack17* hackathon**. Used Microsoft Face API for Android app in Java. Played suitable music for detected facial emotions.

2016 autumn **Research project on home robotics**. Explored modern methods of localisation, navigation, object recognition, and grasping and manipulation of home robots.

Performed data analysis of **WhatsApp group chats** in Haskell.

2012 onwards Solved 180 ***Project Euler*** problems in Java and Haskell.

2009 & 2011 Designed simple product website for ***MiGi glass industry*** in PHP and MySQL.

Activities

2013 to 2014 Bronze in interschool mathematics challenge on an optimisation problem.

Champion and team award in interschool mathematics and science quiz.

Distinction in annual Singapore Youth Festival arts competition choir section.

2012 to 2013 Two distinctions in regional Australian Mathematics Competition.

Gold and school award in regional SASMO mathematics olympiad.

Voluntary weekly environmental cleaning in Waterways Watch Society Singapore.

Miscellaneous

Programming Proficient in Haskell, LaTeX. Experienced in Java, Python, C, PHP/SQL, XHTML/CSS.

Mathematics Research interest in commutative algebra, algebraic number theory, algebraic geometry.

Languages Fluent in English, Mandarin / Hokkien, Malay / Indonesian. Familiar with Japanese.

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