

# James Bryan Graves

Amsterdam, The Netherlands | +31 6 11 75 19 66 | Bloomington, IN, USA | +1 (812) 974-3209 | [gravjabr@iu.edu](mailto:gravjabr@iu.edu)

- Quantum Information Science, Quantum Computer Science
- Algorithms, Complexity, Information Theory, Category Theory (for Quantum Theory)
- Data, Data Science
- Software/System Architecture, Functional ( $\lambda$ ) programming, OOP, APIs, Operating Systems
- Research Assistant for National Science Foundation (NSF) funded quantum software stack development for trapped ion hardware
- 2+ years lecturing/teaching Bachelor's students

## EDUCATION

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### Indiana University

Bloomington, IN, USA

*Quantum Information Science MS, GPA 4.0*

*Aug. 2024 – Present*

- **Courses:** Quantum Computation & Quantum Information, Advanced Functional Programming, Quantum Mechanics, Quantum Programming, Models in Cognitive Science, Research

### Massachusetts Institute of Technology, MIT

Cambridge, MA, USA, remote

*Quantum Computing Fundamentals, xPRO*

*Apr. 2024 – June 2024*

### University of Applied Sciences Amsterdam, The Hague, Saxion, Fontys

The Netherlands

*Introduction Quantum Computing, Master's curriculum development & test run*

*Apr. 2024 – June 2024*

### Purdue University

West Lafayette, IN, USA

*Bachelor of Science in Computer Science, BSCS, Music Theory Minor*

*Aug. 1996 – May 2000*

## EXPERIENCE

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### Researcher

Jan. 2025 – Present

*Indiana University, iu.edu*

*Bloomington, IN, USA*

- Quantum programming language design and implementation
- Quantum compilers
- Target systems: Trapped ions, NISQ quantum computers

### CTO in residence, tech leadership

May 2024 – Aug. 2024

*Antler, antler.co*

*Amsterdam, The Netherlands*

- Entrepreneurship, startups, & venture capital
- Quantum computing
- Gen AI, prompt engineering, & AI/ML
- Compute, GPU & cloud

### Technology Lead (interim CTO), Senior SDE

Jul. 2023 – Apr. 2024

*Dream Machine Innovations Inc., More to\*, moreto.io*

*New York, New York, USA, remote*

- Prompt engineering, integration and content creation with Gen AI (OpenAI GPT-4)
- REST API using Python, PostgreSQL
- Apple iOS app in Swift/SwiftUI

### Co-founder, CTO, Technology Lead

Oct. 2020 – Jun. 2023

*THE EMBASSIES of Good Living AG, embassies.com*

*Zürich, Switzerland, remote*

- No longer working full-time, but still shareholder and involved in the company

### Researcher, Senior SDE

Oct. 2015 – Oct. 2020

*Hubzero, Purdue University, UCSD, San Diego Supercomputer Center (SDSC), hubzero.org*

*San Diego, CA, remote*

- JVM based microservices in Clojure ( $\lambda$ ) & Java
- Data, data science, data visualizations
- Published 2 academic papers, multi-conference speaker

### Lecturer & Workshop Leader

Dec. 2019 – Jun. 2021

*Royal Academy of Art (KABK), kabk.nl*

*The Hague, The Netherlands*

- Teaching position & workshop leader for Bachelor's level design based coding curriculum

- 2 classes per semester, >30 students each
- Conducted additional lectures & workshops for Master's students

## Founder

*Hackers & Founders, hackersandfounders.nl*

- Meetup group & community
- >10000 members across The Netherlands
- co-working, leased property, 850m<sup>2</sup> real estate,  $\approx$  100 desks

Feb. 2011 – Nov. 2019  
Amsterdam, The Netherlands

## Co-founder

*Hackers & Designers, hackersanddesigners.nl*

- Non-profit (Stichting)
- Mission: To bringing art, design, & technology closer
- Authored grant awarded applications, funded year over year

Jul. 2013 – Aug. 2018  
Amsterdam, The Netherlands

## Technology Lead, Senior SDE

*Qardio, Inc., qardio.com*

- Apple iOS app in Swift/Objective-C for Bluetooth connected consumer health devices
- REST API, PHP
- AWS, Docker, PostgreSQL, Embedded C
- Wrote approved United States FDA (Food & Drug Administration) application & specifications

May 2013 – Oct. 2015  
San Francisco, CA & Amsterdam, The Netherlands

## Co-founder, CTO, Senior SDE

*Ideedock*

- Developed REST API in Javascript/Node.js
- Backbone.js based MVC frontend
- Technologies including AWS, MongoDB

May 2011 – May. 2013  
Amsterdam, The Netherlands

## Mobile Lead, Senior SDE

*Whatser*

- Location (GPS) based social media platform, Augmented Reality (AR)
- Apple iOS/Objective-C, C, C++, REST, APIs, Ruby on Rails

Sep. 2009 – May 2011  
Amsterdam, The Netherlands

## Senior SDE

*Interactions Incorporated*

- Teleconferencing platform
- Java, Java EE, HTTP, APIs, HTML, CSS

Jun. 2008 – Jul. 2009  
Carmel, IN USA

## Senior SDE

*Computer Sciences Corporation (Arabia)*

- Biometrics platform
- Java, Java EE, IBM Websphere, Oracle

Feb. 2007 – May 2007  
Riyadh, Saudi Arabia

## Senior Software Consultant

*Software Architects, Sogeti*

- Java, Java EE, IBM Websphere, Oracle, DB2

Jun. 2003 – Feb. 2007  
Riyadh, Saudi Arabia

## SDE

*Cantilever Technologies*

- Java, XML, XLST, PostgreSQL

Oct. 2000 – Feb. 2003  
Purdue University, West Lafayette, IN USA

## SDE

*IBM*

- Test evaluation platform for semiconductor wafer testing

May 2000 – Oct. 2000  
Burlington, VT

## TECHNICAL SKILLS

**Languages:** Python, Haskell, C/C++, Javascript, Java, Clojure, .NET/C#, ...

**Frameworks:** Qiskit, PennyLane, Nvidia CUDA and CUDA-Q, Node.js, ...

*Coliving Conference*, Speaker

Amsterdam, The Netherlands, Sep. 2023

*Lecture/Workshop*, Royal Academy of Art (KABK)

Den Haag, The Netherlands, Jan. 2023

*Speaker*, EGI Conference

Amsterdam, The Netherlands, Nov. 2020

*Speaker*, IMPAKT Festival

Utrecht, The Netherlands, Oct. 2020

*Speaker*, Gateways Conference, Science Gateways Community Institute (SGCI)

San Diego, CA, USA, Oct. 2020

*Lecture/Workshop*, Aalto University

Helsinki, Finland, Dec. 2019

*Exhibitor*, Mutation Festival

Nerdlab, Ghent, Belgium, Oct. 2019

*Participant*, Sandberg Instituut Masterclass

Amsterdam, The Netherlands, Mar. 2019

*Workshop/Exhibitor*, Science Gateways Community Institute (SGCI)

San Diego, CA, USA, Sep. 2018

*Organizer*, Hackers & Designers Summer Academy 2018

Amsterdam, The Netherlands, Jul. 2018

*Lecture/Workshop*, School of City Design, CAFA

Beijing, China, Oct. 2017

*Lecture/Workshop*, Fine Arts Academy of Hunan Normal University

Chang Sha, China, Oct. 2017

*Exhibitor*, Oddstream

Arnhem, The Netherlands, Oct. 2017

*Organizer*, Hackers & Designers Summer Academy 2017

Amsterdam, The Netherlands, Jul. 2017

*Speaker*, FIBER Festival, Speaker

Amsterdam, The Netherlands, May 2017

*Speaker*, Hackers & Founders Meetup

Amsterdam, The Netherlands, Apr. 2017

*Speaker*, REMEDI Pump collaborative conference

Chicago, IL, USA, Apr. 2017

*Residency*, Oddstream Oddstay

Arnhem, The Netherlands, Apr. 2017

*Exhibitor*, STRP Festival

Eindhoven, The Netherlands, Mar. 2017

*Workshop*, Baby you can drive my car (self-driving car)

Amsterdam, The Netherlands, Feb. 2017

*Exhibitor*, KASK, ... een kleptomaan neemt de dingen letterlijk ...,

Gent, Belgium, Feb. 2017

*Workshop*, Big Brother Awards

Amsterdam, The Netherlands, Nov. 2016

*Exhibitor*, Journey with Hovel Bot  
Brussels, Belgium, Oct. 2016

*Speaker*, ACM Purdue University  
West Lafayette, IN, USA, Oct. 2016

*Workshop*, Endless Cities Festival  
Toronto, Canada, Sep. 2016

*Speaker*, Otis College  
Los Angeles, CA, USA, Sep. 2016

*Residency*, Mad Scientist Festival  
Bern, Switzerland, Sep. 2016

*Organizer*, Hackers & Designers Summer Academy 2016  
Amsterdam, The Netherlands, Jul. 2016

*Exhibitor*, Northside Festival  
Brooklyn, NY, USA, June 2016

*Speaker/Exhibitor*, Sektor 3.0 Conference  
Warsaw, Poland, May 2016

*Workshop*, LibreGraphics Meetup  
London, United Kingdom, Apr. 2016

*Workshop*, Sandberg Instituut  
Amsterdam, The Netherlands, Feb. 2016

*Exhibitor*, ZineFest  
Berlin, Germany, Nov. 2015

*Workshop*, Mozilla Mozfest  
London, United Kingdom, Oct. 2015

*Speaker*, EBF Conference  
Groningen, The Netherlands, September 2015

*Organizer*, Hackers & Designers Summer Academy 2015  
Amsterdam, The Netherlands, Jul. 2015

*Residency*, Invisible Cities Festival  
Gorizia, Italy, June 2015

*Exhibitor*, Appril Festival  
Amsterdam, The Netherlands, Mar. 2015

*Workshop*, University of Amsterdam  
Amsterdam, The Netherlands, Feb. 2015

*Workshop*, Mozilla Mozfest  
London, United Kingdom, Oct. 2014

*Exhibitor*, Collision Conference  
Las Vegas, NV, USA, May 2014

*Exhibitor/Speaker*, Tech Crunch Disrupt  
Berlin, Germany, Oct. 2013

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