ALEKSANDR MATTAL

qute.bits@gmail.com

LIFE / EDUCATION

2015	moved to United Kingdom (London)
2004–2012	Christian-Albrechts-University - Kiel, Germany
	Diplom in **Computer Science** (with minor in **Mathematics**).
	Final grade: 1.95 (best possible: 1.0)
2004	moved to Germany (Kiel)
1996–2004	High school Tallinna Tõnismäe Reaalkool (with major in **Mathematics**) - Tallinn, Estonia
	Final grade: 4.89 (best possible: 5.0)
1997–2001	Art school Rakenduskunsti Erakool - Tallinn, Estonia
	Final grade: 8.17 (best possible: 10.0)

WORK EXPERIENCE

2014–Present

Synthace, Ravelin, nCube, Murat Diril etc. - London, UK
Contractor Developer / Designer (JavaScript, Python, PHP)
· Hybrid app UI for a cool home automation system (AngularJS/Ionic),
· Switched to full stack (MongoDB/ExpressJS/AngularJS/Node.js + Ionic),
· Built a CRM and an inventory system in 8 months (full stack, LAMP),
· Developed an in-browser QR code PDF generator and QR code scanner (JavaScript),
· Built and deployed a sitemap with 150 million URLs (Python),
· Full redesign of CI for Murat Diril, produced full advertisement package (print).

2007–2014

H19 Produktion - Kiel, Germany
Lead Designer / Web Developer (JavaScript, Python, PHP)
· Developed (both frontend and backend) websites/services based on Wordpress/Contao,
· Built a job board (full stack, LAMP),
· Designed CI's, posters, flyers, catalogues, business cards etc.

2012–2014

WortBildTon, New Communication - Kiel, Germany
Contractor Designer / Jr. Project Manager / Web Developer (JavaScript)
· Developed an analytics tool and a UI for a project (2000+ users as of Oct.2014).

2010

Raytrix - Kiel, Germany
Internship (Research)
· Lazer path optimization using pythagorean-hodograph curves in R^4,
· Disproved given hypothesis and two of its generalized versions.

2006–2010

Christian-Albrechts-University - Kiel, Germany
Scientific Assistant / Student Tutor / Programmer (C++, Java)
· Proposed an algorithm for real-time matching of filmed objects with their 3D-models,
· Implemented several real-time pattern recognition and triangulation algorithms,
· Optimized image-recognition code so that it could be used in real-time video analysis,
· Implemented several sheduling algorithms and a GUI for their usage (J2EE + Swing),
· Tutored a lecture in cryptography, corrected students homework,
· Voluntarily gave a sneak peak into Zero-Knowledge Proofs and PCP Proofs to the students,
· Also did some boring stuff: wrote TYPO3 modules.

RESEARCH EXPERIENCE

Field	Game Theory
Title	Extensive Form$^+$: Describing Games Linear Nature (Diploma Thesis, 52 pages)
PDF (in English)	`https://github.com/qutebits/final_thesis`
Supervisor	Prof. Dr. Thomas Wilke, chair for theoretical informatics, University of Kiel.
Description	Studied games with betting structures present in Poker. Proposed a new way to describe such structures, a strategy space and a set of equilibria on it. Proved the existence of such equilibria for finite Extensive Form$^+$ games satisfying perfect recall. Submitted in 2011.
Final grade:	1.0 (best possible: 1.0)

PORTFOLIO

GitHub Portfolio – `https://github.com/qutebits/`

Graphical Portfolio – `http://www.coroflot.com/qutepixels/`

PERSONAL PROJECTS

YAML to PDF Resume Generator (Python Script) – `https://github.com/qutebits/resume_42/`
· Generates a small and nice PDF Resume out of YAML data,
· Main script is written in **Python**, translates **YAML** data into TEX using **Jinja** templating engine.
· This whole Resume is generated with it :)

VKontakte Playlist Downloader (Chrome Extension) – `https://github.com/qutebits/vkpd/`
· Chrome Extension for batch download of audio tracks from social network VKontakte,

PIP (Web Scraper)
· Scrapes 80+ pages of different boards/blogs/listings (HN,Reddit,Gumtree,etc.) that I visit daily,
· Can scrape some more advanced pages like meetup.com or Google Maps
· Sorts the scraped data and filters according to several criteria,
· Reads the filtered data with a human voice on a single click of a button using a TTS library :)

Etsy Thug (Online Tool) – `https://github.com/qutebits/etsy_thug/`
· Tool for quick creation of Etsy collections.

Stackin (UI Concept) – `https://github.com/qutebits/stackin/`
· Responsive UI concept for sorted value-assigned text data (like Hacker News posts).

QR codes PDF generator (JavaScript) – `https://github.com/QuteBits/qr_pdf_generator`
· Really easy to install/use,
· Runs purely in the browser (no server needed),
· In-browser QR codes generator which then builds and downloads a PDF with them.

QR codes Scanner (JavaScript) – `https://github.com/QuteBits/qr_scanner`
· Really easy to install/use,
· Runs purely in the browser (no server needed),
· HTML5 QR codes scanner which uses cameras on your devices to scan QR codes.

My Taste of Ideas (Blog Post)
· 21 personal ideas that appeal to my taste,
· Used **Markdown** for posts, **MathJax** for TEX snippets, **Dropbox** as storage for posts and **GitHub** as storage for images.

TOOLS

Languages of choice	JavaScript, Python, PHP
Stack - big stuff	Node.js/ExpressJS/AngularJS/React/d3.js, Python/PHP, MySQL/MongoDB, Git
Stack - small stuff	js/jQuery, PHP, MySQL, Wordpress/Contao
Teamwork	Git, Linux, Slack/Hipchat, Asana/Pivotal Tracker, Dropbox/Evernote/Trello/Google Docs
Design	Adobe Creative Suite

ACHIEVEMENTS

2004   Participant of International Mathematical Olympiad (IMO04 - Athens, Greece) as a representative of Estonian National Team.

2001   2. place, PC game character design competition (Etherlords, Nival Interactive, 2001).

HUMAN LANGUAGES

English	Fluently speaking and writing (IELTS 7.5/9.0, GMAT 730/800)
German	Fluently speaking and writing (TestDaF 17/20)
Estonian	Speaking and writing (Kesktase 89/100)
Russian	Native language