PETER VERZIJL

I am Peter Verzijl, currently a **Development Engineer** in the Technology Innovation Lab at **ABN AMRO**, with a bachelors degree in **Creative Technology** achieved at the **University of Twente**. My passion lies in **developing video games**, painting, bouldering and I like to discuss technological and philosophical subjects.

CONTACT INFO

Jan van Foreeststraat 290
Utrecht, Utrecht
3521 TX
The Netherlands

Date of birth	27-08-1993
Drivers license	B
Website	www.peterverzijl.com
Email	peter@verzijl.com
Telephone	+31 6 273 11 953
LinkedIn	peterverzijl

EDUCATION

Industrial Design
University of Twente
2012 / 2013

In my first year at the University of Twente I have studied Industrial Design. It taught me a lot about the structure of creative processes and how to turn sketches and ideas into physical design prototypes. Other subjects include manufacturing, 3D CAT software, material sciences, physics, and mathematics.

Creative Technology
University of Twente
2013 / 2017

Creative technology combines the fields of art, electrical engineering, new media, industrial design, and computer science to create multidisciplinary students which bridges the gap between the fields. Courses focused on projects and rapid prototyping are at its core. Where themes like ubiquitous computing, artificial intelligence and big data are explored.

Graduation Project - Asphalt Paving Simulator

In the graduation project for Creative Technology I developed a serious game for asphalt road construction education. The game aims to teach cause effect relationships between weather and asphalt compaction by using its game mechanics. The asphalt road construction industry saw great potential and is currently being developed further for the use in education and businesses alike.

Pre-master Computer Science
University of Twente
2015

To deepen my understanding on how computers work on a lower level and grasp modern software development, I have done a pre-master in Computer Science in my minor. During this minor, I have gained knowledge on software architecture, the use of the Unified Modelling Language, object-oriented programming, test driven development, Java Modelling Language, operating systems, how Dutch law interacts with information technology, computer architecture and discrete mathematics.

WORK EXPERIENCE

Interaction Designer, Artist & Programmer
Random Abductions
2014 / 2015

Random Abductions is a company a roommate and I started. The goal of the company was to develop interactive applications and do game development related research. During this time we were contracted by third parties to take on jobs in the fields of animation, web interaction design, simulation tools for 3D printing and game design. These projects are laid out hereafter.

ISO 55000 Animation

In 2014, we created an animated movie explaining the ISO 55000 standard on asset management for DNV-GL, ENEXIS and NAN. My role in the project was to create the art assets and do animation work in Adobe Flash.

Transavia web game

A contract job for Wirelab to do the interaction design and implementation in JavaScript for an interactive guessing game. My role was to create the UI interactions and to implement the game mechanics in JavaScript.

Printr visualizer

A contract job for Printr to create a 3D visualizer for the 3D printing process. The simulator takes a G-code file and produces an approximated animation for the entire printing process. My role was to implement the visualisation and the GCode parsing.

Game Development

I have worked on tools, did gameplay programming, systems programming, art direction/ creation, artificial intelligence and game design for several unfinished products during the existence of the company. Reference the portfolio website for further details.

Help desk
Studenten Net Twente (SNT)
2012 / 2013

Supporting, informing, answering questions and helping to troubleshoot issues on networking related topics both at the help desk counter, by email and telephone.

Support & Help desk
Salutaris VOF
2015 / 2017

Administering, installing and supporting domain registering computers for various associations on the university campus. Work involves setting up mail clients, creating new accounts on the domain server, restoring backups, setting up printers, configure software and troubleshooting issues for users.

Student Assistant
University of Twente
2013 / 2017

Helping lecturers with preparing study material, answering questions during lab sessions and seminars and helping students with their overall learning process. I have assisted courses in programming, Autodesk Maya, and lab sessions in circuits and electronics. I have also helped teachers with the grading process and given lectures.

Development Engineer
ABN AMRO
2017 / Now

Researching new unproven technologies at both software and hardware level. Finding use-cases, setting up experiments and documenting experiment results for later review. These technologies are anywhere between XR, sensors and IoT devices, robotics applications, distributed data networks and new ways of computing. Activities include: building software solutions, giving internal training on new technologies, researching documentation and source code, studying new emerging fields, visiting technology events and reading technology related news, maintaining contact with technology providers and external engineers.

AR Shop

Together with Extra-Reality we created an AR shop in Unreal Engine. My responsibility was to write Blueprint nodes (in C++) for communicating with an AWS server and a robot over the MQTT protocol.

PROJECTS

For more projects and more detailed descriptions of the listed projects, take a look at my **portfolio**.

Profile Piece - Arcade Cabinet
Lyceum Ypenburg
2011 / 2012

A profile piece for my final year of higher education in which I created my own arcade cabinet. The cabinet was made from MDF wood which was self-sawn and painted. The buttons were wired and soldered to a membrane keyboard PCB which connected to a small net-book running Windows XP and some proprietary font end software. The school offered to buy the arcade cabinet for promotion purposes.

Profile Piece - First Tech Challenge
Lyceum Ypenburg
2010 / 2012

During my higher education, I have participated in the First Tech Challenge twice, which is an international robotics competition in which scholars are tasked to engineer and program a robot of their own design to overcome competitive challenges. My roles have been to engineer the robot's designs, documentation, programming the autonomous and user controlled phases and finally project lead.

Physical Digital Board-game
University of Twente
2012 / 2013

In the final quarter of industrial design, I developed a board game where you need to blindly navigate mazes through a force feedback joystick which I created from Lego Mindstorms motors and programmed in Java. The goal of the game was to find the exit through finding keys and open locked doors. The joysticks motors would push back when the player attempted to move through a wall and would move freely when the direction was not obstructed.

Musical Instrument
University of Twente
2013 / 2014

For an assignment to learn how to use the Arduino platform, a musical instrument had to be created. I decided to use two joysticks and a pedometer as input. The pedometer controls the beats per minute and the control sticks based on the angle and distance the notes which would be played. In the video, you can see how "altijd is kortjakje ziek" (a Dutch song for children) can be played.

Illuminatable
University of Twente
2013 / 2014

Illuminatable was a project done for a technology-art festival in Enschede called Gogbot. The Illuminatable is a musical instrument for four participants. Music is composed by drawing lines in the four quadrants on the table's surface, with each quadrant having its own instrument. Depending on the location of the lines, certain musical notes are played like a sequencer. An infrared camera looking for light pens and phone flash-lights could be used for drawing.

Text to Soundtrack
University of Twente
2014 / 2015

Together with students from Computer Science I created an application which searches theme appropriate music for e-books. It does so by using a bag of words algorithm to figure out the tone of a paragraph and searching Spotify for a song that fits to that particular tone. Testers and people on the demo market thought the system worked very well and told us that the music added a lot to their reading experience.

Table of Continents
University of Twente
2014 / 2015

The table of continents was a project created to better visualize global data in a physical way. The table uses stepper motors to raise and lower continents. The column below the continent can show different colours to encode data. A tablet was used such that users could choose their own data sets to show on the table.

Ensketon
20CREATHON
2015

In 2015, I participated and won a hackathon to come up with solutions to solve the water problem of Enschede. During heavy rain, the city of Enschede often overflows as the sewer system cannot cope with the water excess. I, together with a team developed a smart water barrel which would act as a buffer and would automatically release water at less straining moments.

Stargazer
University of Twente
2015 / 2016

Stargazer is a laser with which you can track various satellites including the international space station in real time. The laser could be controlled by a website in which you can select which object you want the laser to track. The project used a SOC, a Raspberry Pi, web sockets, various web APIs and a NodeJS web server.

Game jams
2012 / 2017

This is a list of all game jam games in which I have participated during and after my academic career.

Ludum Dare 25	Evil Santa Rampage
Ludum Dare 26	STL RNNR
7DFPS	Colossus
MiniLD #58	Vectro Wars
Ludum Dare 28	Cyber Defence
Ludum Dare 29	SubWars
Ludum Dare 30	Space Trader
Ludum Dare 31	SpeedRPG
Ludum Dare 33	Doom Death & Destruction Tycoon
Global Game Jam 2016	Hooga Chaka
Ludum Dare 36	Circle of Fire
Ludum Dare 37	RoomRacers
GMTK Jam	Shooting Stars

PROJECTS

Unity3D
I have finished over 15 projects using this game engine including my bachelor thesis and many game jam entries. I have written tools, programmed gameplay systems, made virtual reality and mobile experiences. I have also given training and assisted many students on the usage of Unity3D.

Computer Programming
Proficient in: C#, C++, Java, Python, Java Script and Processing. Experienced mostly in audiovisual interactive applications such as art installations data visualisations and video games and setting up servers and writing small scripts.

Design and Tools
Design experience in: drawing products, visual ideation, brainstorming, graphic design (Photoshop, Illustrator, InDesign), 3D modelling (Blender, Autodesk Maya, SolidWorks)

Web Development
Front end design and implementation in HTML5, CSS3 and scripting in JavaScript. I have also worked with: Meteor, NodeJS, MongoDB and Laravel.

My website
Front-end theme development for WordPress (PHP, HTML5).

www.randomabductions.com
Front-end / back-end development in Meteor (PHP, HTML5).

Beyond Banking narrowcasting solution
Front-end / back-end development for an entire narrowcasting solution in NodeJS and SocketIO

Features in the S. A. Proto website
Front and back-end development in Laravel (PHP)

Game Development and UX Design
Five years of game development experience, participating in hackathons and game jams (Ludum Dare, Global Game Jam, 7DFPS, GMTK Jam) where I worked in multidisciplinary teams to create innovative new ways of interaction and creating innovative experiences.

OTHER NOTABLE ACTIVITIES

Unity3D
In my fifth year of higher education I initiated the creation of a student council by forming a soundboard group. During my time there, I helped to create the fundamentals needed for the first election round and support structure to foster collaboration between teachers, the board and students. I also helped to address problems, helped in communication between students and organisation and fought for student's rights.

Game Design Twente
Game Development is a huge part of my life and passion. That is why, together with a roommate, I set up a Game Design community in Enschede (Overijsel, The Netherlands), to bring people from all kinds of fields together to share knowledge and to form diverse teams. A Facebook group with over 100 members was created, monthly meetings were held and game jams were organised.

Participation in EU-XCEL
In 2015, I was selected to participate in a European program of 12 weeks in which I got training and support on business development. Here I participated in a start-up scrum training for one week followed by a virtual acceleration period in a multidisciplinary and multicultural team.

PR @ IAPC
IAPC is a student managed computer supply shop on the university campus. As part of the PR committee, I am designing posters, thinking of ways to promote their products and designing the corporate image. I also volunteered as a salesman there for two years.

Game Jam Committee @ I.C.T.S.V. Inter-Actief
During my pre-master computer science, I was chosen as chairman to the game jam committee. During this period we organized university wide game jams for students to participate in.

Web and Android Development @ S. A. Proto
At the study association for Creative Technology, I have aided in the development on both the front and back end of a Laravel website. Here I developed and integrated features. I have also helped to develop an Android application for this student association.

Analysis Paralysis
During my final year at the University of Twente I organized a game design 'book' club for video games in which we would review and analyse video games. During the meetings, we would deconstruct game design, aesthetics, story and fun factor of the featured game that month.

Public Speaking

Unity 3D Training

A beginners training for students to familiarize themselves with the Unity3D's tools and scripting. The training was participated by 12 students and trained them in using the physics, spawning prefabs through script, managing scenes and the build process.

Introduction lecture on programming concepts

I was asked by the study association to give a lecture on the basic principles of programming as a summary and preparation for programming exams. I explained programming with a data oriented viewpoint where programs just manipulate data to get to the desired result. During the lecture I explained variables, operations, classes, types, functions, flow control, scope, the this pointer, inheritance and basic data containers.

Game Design Lecture

I have given this lecture twice as preparation for students and participants alike to join the follow-up game jams. During this lecture, I delved into the aspects of aesthetics, story, technology and game play. The participants were challenged to come up with ideas quickly through brainstorm techniques. Both times the tutorial was very well received.

Lecture on quick game development

A lecture I gave on rapid game development techniques. The focus of the tutorial was to teach time structure, identify the minimum viable project, time saving tools and techniques, choosing art styles for speed, how to require open source resources and did a practical session on brainstorming techniques to come up with ideas fast.

Lecture on Visual Studio

A teacher at the University of Twente asked me to take over a lecture on the installation process and debugging capability of Visual Studio to students. I walked them through the process of installing OpenFrameworks and what debug features are useful for what scenarios. Afterwards I helped them solve problems during the practical.

Product and Project Presentations

Various pitches and presentations for projects during my academic career in both Creative Technology and Industrial Design.

Hololens Lectures

I've created and given three lectures on making Hololens applications with Unity3D and Visual Studio. Explaining the hardware of the Hololens, gave an overview of the inner workings of spatial mapping and prepared a workshop such that visitors would get some hands-on experience.

Rapid Prototyping

I am able to quickly work out an idea or a concept into a working prototype. Both real world physical prototypes as well as electrical sensor and software products. Related tools: Arduino, Raspberry Pi, Processing, OpenFrameworks, 3D printing and others.

Game Jams

During my academic years, I have participated in 13 game jams. From Global Game Jam to Ludum Dare and the 7DFPS. From these time constrained events, I have learned to quickly prototype ideas and to find time efficient ways of creating and implementing ideas. For a comprehensive list, see the projects section of this curriculum vitae.

I thank you for taking the time to read my resume. Feel free to get in touch if you have any questions, or check out my website for more detailed project descriptions and personal creations.

Have a nice day!