Titus Ebbecke

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Würzburg, Germany

RESEARCH INTERESTS

Human-Computer-Interaction, Applied Machine Learning, Robotics, Generative Art, Data Visualization

EDUCATION

University of California, Berkeley (Candidate) — Berkeley, USA
Master of Design; (Program delayed due to COVID) — 2021 – 2022 (expected)

University of Applied Sciences Würzburg-Schweinfurt — Würzburg, Germany
Bachelor of Arts in Design – With Distinction; GPA: 3.8/4.0 — 2015 – 2019

RELEVANT EXPERIENCE

Helmholtz Institute for RNA-based Infection Research — Würzburg, Germany
Software Engineer — March 2020 - Present

Creating visualization software to accelerate the discovery & exploration of RNA in pathogens. Improving analysis of large datasets (RNA-Seq, Grad-Seq) & creating tools for handling results of High-Throughput-Screening experiments in Python, Vue.js, Pandas, Flask, MongoDB, deck.gl.

Nimble Spaces, Inc. — Berkeley, USA
Co-Founder, Part-Time — April 2020 - Present

Founded Nimble Spaces after winning InnoDays hackathon and securing $10,000 initial Investment from EDF Innovation Lab. Currently in Berkeley's 'SkyDeck' Incubator. Already deployed 'Nimble parklets' to support COVID-19-affected restaurants in Oakland.

KUKA Robotics AG — Augsburg, Germany
Bachelor Student — June 2019 - July 2019

Developed novel raster-image to CNC-paths algorithm. Assisted by head of corporate research. Organized funds and a partnership with KUKA to create my bachelor thesis consisting of an industrial robot painting GAN-generated artworks on canvas. Developed intuitive CLI-tool for demos at fairs. Demonstrated full project to KUKA R&D and marketing.

Volkswagen AG — Berlin, Germany
UI/UX Designer — September 2017 - March 2018

Developed high-fidelity prototypes for a central app-concept serving the modern VW fleet in Framer/CoffeeScript. Prototypes were presented to board of directors. Prototyped chat bots & similar predictive assistants. Conceptualized & designed UX flows for a variety of projects. Created UI and corporate design guidelines.

Freelancer — Germany
UI/UX Designer, Web Developer, Cinematographer — 2013 - March 2020

Designed & developed UIs and Frontends for a large variety of desktop and mobile applications with up to 20,000 users. Created several websites for clients. Directed/shot movies for advertisements/student films across Germany with team sizes of up to 25 people.

AWARDS & DISTINCTIONS

- **2020 Fast Company Linda Tischler Award**: 'SUPERvisor – Augmented Face Shields for COVID-19'
- **Berkeley SkyDeck (Hot Desk)**: 'Nimble Spaces' was awarded a place in Berkeley's most prestigious Incubator
- **Fast Company Innovation by Design Awards (Finalist)**: 'SUPERvisor – Augmented Face Shields for COVID-19'
- **MDes Distinguished Scholar Award**: $20,000 scholarship from UC Berkeley for 'candidates of the highest caliber'
- **European Design Award (Finalist)**: 'Art(ificial) – An autonomous robot paints AI generated art'
- **InnoDays Berkeley (Winner 'Implementation')**: 'ePark' now Nimble Spaces, Inc.

- **Jacob's Institute COVID-19 Challenge (Runner-Up)**: 'SUPERvisor – Augmented Face Shields for COVID-19'
- **InnoDays Innsbruck (Winner 'Habitat')**: 'InnsPark' now Nimble Spaces, Inc.
- **ADC Junior Award ('Auszeichnung')**: Bachelor Thesis: 'Art(ificial) – Artistic Creativity as a Property of Human and Artificial Intelligence'
- **A' Design Award (Bronze)**: Bachelor Thesis: 'Art(ificial) – Artistic Creativity as a Property of Human and Artificial Intelligence'
- **London International Creative Competition (Shortlist in Installation Art)**: Bachelor Thesis: 'Art(ificial)'

SELECTED COURSEWORK

- ### Bachelor Thesis
  Title: 'Artistic Creativity as a Property of Human and Artificial Intelligence'

  4x4x2m installation. An autonomous industrial robot, painting AI-generated artworks without human supervision. Robot painted for >10 hours during a two day exhibition.

- ### Interactive Media
  Topic: 'Artificial Intelligence'

  Trained AI on generating novel artworks. Setup & benchmarked GANs and computing pipelines (VMs/Jupyter Notebooks). Dataset of 21,000 images, organized with PowerShell, optimized with self-developed face-detection-based image-cropper. Trained for >100 hours with NVIDIA V100 GPUs.

- ### Interface Design
  Topic: Climate Change

  Created 4x2x3m interactive sculpture displaying change of north-polar ice cap over the past decade. Scraped NASA/NSIDC satellite data and interpolated it. Constructed tangible user interface to bring scientific methods & findings closer to 50-100 exhibition visitors.

SKILLS

- **Robotics**: KUKA Robot Language, Installation & Programming of KUKA R1420 w. KRC 4, WorkVisual
- **Programming**: Python (OpenCV, NumPy, Pandas), JavaScript (Vue.js), Linux/Unix Shell, Git, HTML/CSS, Docker, Rapid Prototyping w. Framer (CoffeeScript), TensorFlow (Beginner), MongoDB
- **Visual Design**: Adobe CC (10+ years experience in: Photoshop, After Effects, InDesign, Premiere, Illustrator), Xd, Sketch, Digital Illustration/ConceptArt (Wacom)
- **3D**: Cinema 4D, 3DS Max, Photorealistic Rendering w. Corona & Vray & Quixel Megascans/Bridge/Mixer, Unity (Beginner)
- **Hardware**: Soldering, Sewing & Tailoring
- **Cinematography**: DaVinci Resolve, Operating Blackmagic Ursa 4K & BMCC & BMPC, Sony FS-Systems, Canon C-Series, Proficient in 4K RAW Workflow/Color Grading