Titus Ebbecke

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Berkeley, CA

Research Interests

Human-Computer-Interaction, Data Visualization, Robotics, UI/UX Design, Applied Machine Learning

Education

University of California, Berkeley — Berkeley, USA
Master of Design – MDes Distinguished Scholar (Delayed due to COVID) — *01/21 – 07/22 (expected)*

University of Applied Sciences Würzburg-Schweinfurt — Würzburg, Germany
Bachelor of Arts in Communication Design – With Distinction; GPA: 3.8/4.0 — *10/15 – 08/19*

Relevant Experience

Helmholtz Institute for RNA-based Infection Research — Würzburg, Germany
Design Specialist – 'Integrative Informatics for Infection Biology' — *03/20 - 02/21*

Research Advisors: Jun. Prof. Lars Barquist, Prof. Jörg Vogel.
Developing 2 web apps designed to accelerate RNA research in pathogens through novel GUI systems for programming data mining operations (*Python [Pandas, NumPy, Flask], Vue.js, MongoDB, deck.gl, HTML, CSS*). Developing WebGL 3D & 2D heatmap w. up to 100x faster loading speeds compared to matplotlib/D3.js. Developing & maintaining CI/CD *(GitHub Actions, Kubernetes)*.

Nimble Spaces, Inc. — Berkeley, USA
Co-Founder — *04/20 - Present*

Co-founded Nimble Spaces after winning InnoDays hackathon and receiving $10,000 initial Investment from EDF Innovation Lab. Currently in UC Berkeley's 'SkyDeck' & 'Big Ideas' Incubator. Designed & deployed 'Nimble parklet' to support COVID-19-affected restaurant in Oakland.

KUKA Robotics AG — Augsburg, Germany
Bachelor Student — *06/19 - 07/19*

Organized funds and a partnership with KUKA head of research to create my bachelor thesis consisting of an industrial robot painting GAN-generated artworks on canvas. Developed novel raster-to-CNC-path algorithm *(Python, OpenCV, KRL, NumPy)* and intuitive CLI-tool for demos at exhibitions *(bash)*.

Volkswagen AG — Berlin, Germany
UI/UX Design Intern — *09/17 - 03/18*

Developed high-fidelity prototypes for a central app-concept serving the modern VW fleet with *Framer / JavaScript, Photoshop, Xd*. Interactive prototypes were presented to board of directors. Prototyped chatbots & similar predictive assistants. Conceptualized & designed UX flows for a variety of projects. Created UI and corporate design guidelines.

Contractor — Germany
Web Developer, UI/UX Designer, Cameraman

Developed & designed UIs and Frontends for a large variety of desktop and mobile applications with up to 150,000 users. Directed/shot movies for advertisements/student films across Germany with teams of up to 25 people.

Awards & Distinctions

- **2020 Fast Company Linda Tischler Award**: Winner
- **Berkeley SkyDeck Incubator (Hot Desk)**: 'Nimble Spaces' was awarded a place in Berkeley's most prestigious Incubator. **Acceptance rate**: 5.3% (98 out of 1850)
- **Big Ideas Contest**: 'Nimble Spaces' – Finalist (Final round in 2021)
- **Fast Company Innovation by Design Awards**: Finalist
- **MDes Distinguished Scholar Award**: $20,000 scholarship from UC Berkeley.

- **European Design Award 2020**: Finalist
- **InnoDays Hackathon Berkeley**: Winner 'Implementation'
- **InnoDays Hackathon Innsbruck**: Winner 'Habitat'
- **2020 ADC Junior Award**: 'Auszeichnung'

SELECTED COURSEWORK

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

  Autonomous industrial robot, painting AI-generated artworks without human supervision. Robot painted for >10 hours during a two-day exhibition. Fabricated 800 lbs movable steel-reinforced concrete base with adaptable tension control & installed robot on it. Soldered wiring for various interfaces.

- **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 custom face-detection-based image-cropper (OpenCV). Trained for >100 hours with NVIDIA V100 GPUs.

- **Tangible Interfaces**
  Topic: 'Climate Change'

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

SKILLS

- **Programming**: Python (NumPy, Pandas, OpenCV), JavaScript (Vue.js), Git, HTML/CSS, Unix Shell (bash), Docker (Kubernetes), Rapid Prototyping w. Framer (JS/CS), CI/CD (GitHub Actions), MongoDB, Tensorflow (Beginner)
- **Visual Design**: Adobe CC (10+ years experience in: Photoshop, After Effects, InDesign, Premiere, Illustrator), Xd, Sketch, Framer, Figma, Digital Illustration/ConceptArt (Wacom)
- **Robotics**: KUKA Robot Language, Programming of KUKA robots (KRC 4, KRL-Ethernet, Profibus), WorkVisual
- **3D**: Cinema 4D, 3DS Max, Unity, AutoCAD, Corona Renderer, Quixel Megascans/Bridge/Mixer, Fusion360, Rhino + Grasshopper
- **Cinematography**: DaVinci Resolve, Premiere, Audition, Blackmagic Ursa 4K, -BMCC, -BMPC, Sony FS-Systems, Canon C-Series, 4K RAW Workflow, Color Grading
- **Languages**: German (mother tongue), English (fluent, IELTS 8.0)