Qasim Warraich

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Note: Address and telephone number are redacted from this publicly available document

Having recently completed my Master's degree, I am excited about the next steps. I am looking forward greatly to the opportunity to join a team where I can continue learning and expanding my knowledge and build some cool software along the way.
In University, my work and personal interest has mostly been in the area of computer vision and its applications in robotics. As a component of my Master's degree, I completed an individual study module with the Robotics and Perception research group at UZH. This study involved gaining familiarity with Event-Based Vision and its application in solving problems such as VIO, SLAM. I also completed a group project with the Computer Vision Laboratory at the ETH, in the realm of domain adaptation for semantic image segmentation.
What excites me the most, is working on projects that influence and play a tangible role in the physical world. I am also very interested in open source software and, through my work experience, am familiar with various web technologies. I also have a strong personal affinity for User-Centered Design.

Experience

Software Developer and Bicycle Messenger December 2020 – Present
Velokurier Bern Genossenschaft *Bern, Switzerland*

- Involved in all aspects related to software at Velokurier from architecture through deployment to ongoing development.
- Currently developing and maintaining a full-stack web application using Laravel, Google Cloud Platform and MariaDB. The application is used daily by riders and the business side for managing dispatched jobs and quality control.
- Work in close coordination with the business side and external partners to help realise the technological future of the company.
- I also ride, dispatch and seize every opportunity to apply and improve my German skills.

Master's Project March 2021 – August 2021
ETH: Swiss Federal Institute of Technology in Zurich (Computer Vision Laboratory) *Zurich, Switzerland*

- Exploiting Semantics and Depth for Domain-adaptive Visual Scene Understanding

Teaching Assistant: Algorithms and Datastructures February 2021 – July 2021
University of Zurich: Department of Informatics *Zurich, Switzerland*

- Taught weekly exercise sessions and assisted students with weekly programming assignments.
- Got students up to speed with the C programming language and the implementation/fundamentals behind popular algorithms and datastructures.

Education

University of Zurich Zurich, Switzerland
Master of Science in Computer Science *February. 2019 – September. 2022*

Relevant Coursework:

- Visual Algorithms for Mobile Robotics
- Individual study in Event-Based Vision
- Informatics 1 & 2 [Algorithms and Datastructures]
- Master's Project in Deep Leaning and Computer Vision
- Programming Languages and Paradigms
- Big Data Analytics

City University of New York: Hunter College New York, NY, USA
Bachelor of Arts in Media Studies — Major GPA: 3.62/4 *September. 2013 – July 2017*

Relevant Coursework:

- Game Programming 1 & 2
- Web Development 1 & 2
- Concepts in Gaming
- Introduction to Computer Science
- Programming for Everyone (Python)
- Digital Design and Usability

Skills

Programming Languages: Go, Typescript, C, Python, PHP
Other Languages: Shell Scripting, SQL, Markdown, TEX
Familiar Tools and Libraries: Linux, Git, Ansible, Google Cloud Platform, Gitlab CI/CD
Spoken Languages: English (Native), Urdu (Native), French (Novice), German (Intermediate)
Other: PC Hardware Knowledge, Basic Networking, Basic Electronics (Breadboard and Soldering)

Projects

CLI-Tutor | Go
- Interactive learning tool to introduce new to command line users to the world of textual interaction.
- Aims to create a forgiving shell like environment to teach users command line fundamentals and core utilities through guided lessons.
- gitlab.com/qasimwarraich/cli-tutor.git
- gitlab.com/qasimwarraich/svelteterm.git (Associated Web Application)

Svelteterm | Go, Typescript and Docker
- Web application that servers as the web interface for *CLI-Tutor*.
- Written in Svelte and utilising Xterm.js, this tool allows for a sandboxed container running the *CLI-Tutor* to be served and interacted with over the internet (via WebSockets and Docker).
- clitutor.chistole.ch
- gitlab.com/qasimwarraich/svelteterm.git

Exploiting Semantics and Cycle Association for Domain-Adaptive Semantic Segmentation | Python, Pytorch
- Contrastive learning based replication study of a domain adaptive semantic image segmentation algorithm.
- Uses DADA as a base to build a pixel level contrastive learning adaptation model.
- Repo: github.com/qasimwarraich/DADA/tree/final Paper: github.com/qasimwarraich/DADA/blob/final/Paper.pdf

The Woof Factor in Zurich | R, Jupyter Notebooks, Git, Yandex Translate API
- Developed a big data pipeline to create predictive models for dog ownership trends using dog ownership, city planning and economic datasets from the City of Zurich's Open Data Platform.
- Implemented in R and then ported to a Jupyter Notebook.
- Exploratory data analysis performed with the aid of numerous visualisations and plots.
- github.com/qasimwarraich/Big-Data-Analytics

Feel free to visit my Github or Gitlab to check out more projects.