Aneta Texler

Personal Data

Place of stay: San Jose, California, USA
Date of birth: 3rd June 1992
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Education

Master's Degree (MSc) **9/2017 – 6/2019**
Computer Science, Faculty of Information Technology, Czech Technical University in Prague.
Master Thesis: Example-based Style Transfer to Facial Animations on Mobile Devices.

Bachelor's Degree (BSc) **9/2011 – 6/2017**
Computer Science, Faculty of Information Technology, Czech Technical University in Prague.
Bachelor Thesis: Feasibility Study of Biometric System Implementation in Business.

Professional Experience

Research Engineer, CTU in Prague, Czechia **7/2019 – 2/2021**
Research & Development. Worked on several computer graphics research projects resulting in two publications. Developed algorithms in C++ focusing mainly on texture synthesis and style transfer. Developed a mobile application for Android in Java allowing real-time style transfer. Participated in writing technical papers.

Data Specialist, CRIF - Czech Credit Bureau, Prague, Czechia **8/2016 – 6/2019**
Software & Database Development. Developed several web scrapers in C#, that were automatically downloading, parsing and importing obtained data into databases. Wrote T-SQL scripts, designed databases, worked in Visual Studio and SQL Server Management Studio.

Journal Publications

A. Texler, O. Texler, M. Kučera, M. Chai, and D. Sýkora: **FaceBlit: Instant Real-time Example-based Style Transfer to Facial Videos.** In *Proceedings of the ACM in Computer Graphics and Interactive Techniques, 4(1)* (I3D'21, April 2021)

F. Hauptfleisch, O. Texler, **A. Texler**, J. Křivánek, and D. Sýkora: **StyleProp: Real-time Example-based Stylization of 3D Models.** In *Computer Graphics Forum, 39(7):575–586* (PG'20+21)

Computer Science & Programming Skills

C/C++	*(5 years)*	Algorithms, backend, Windows, Linux, Android native development
C#	*(3 years)*	.NET Framework
Python	*(2 years)*	scikit-learn, Pandas, NumPy, Jupyter
Java	*(2 years)*	Desktop and Android, NDK, JNI
Web	*(3 years)*	ASP.NET, REST API, Bootstrap
Computer Graphics / Vision	*(2 years)*	Style transfer, face detection, Dlib, OpenCV
Software Development	*(5 years)*	Debugging, maintenance, OOP, UML, design patterns, architectural styles
Data Science	*(2 years)*	Data pre-processing, data mining, web mining, machine learning
Database systems	*(3 years)*	SQL, relational databases, object-relational mapping, Entity Framework, LINQ
CPU & GPU Parallelism	*(1 year)*	OpenMP, MPI, OpenACC, CUDA
Version Control	*(5 years)*	Git, SVN

Selected Projects

FaceBlit [Java, C++]
A research project that resulted in a journal publication and a mobile application for Android. It allows instant style transfer from a given static style exemplar to facial videos in real-time. A face is captured by a mobile device camera and a result is shown on the display. The UI is developed in Java and the whole style transfer logic is written in C++; JNI connects the frontend and the backend.
See more at Project Page

StyleProp [C#, HLSL]
A research project dealing with style transfer from a 2D hand-drawn image to a 3D model in real-time. My main contribution was an upsampling method accelerated on a GPU that increases resolution and quality of the result.
See more at Project Page

Edge Detector [C++, CUDA]
Canny algorithm to detect edges in images, parallel implementation in OpenACC and CUDA.

Overfitting Problem [Python]
Implementation of kNN and RBFN from scratch and their analysis in terms of overfitting. Testing different methods to prevent overfitting.

MVC Game [Java]
Simplified Angry Birds game with MVC architecture and patterns Strategy, Proxy, State, Visitor, Observer, Command, Memento, Abstract factory; unit testing, mocking.

Chess - knight captures all pieces in a minimal number of moves [C++]
Sequential (branch & bound, DFS) and parallel (OpenMP - task and data parallelism, MPI - processes, master-slave) implementation.

Web Applications [C#]
Two different projects using ASP.NET MVC, REST API, Entity Framework, LINQ, Angular.