Krzysztof Jakub Smogór

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EDUCATION

Warsaw University of Technology - Faculty of Mathematics and Information Science

Computer Science and Information Systems - CAD/CAM Systems Design (M.Sc.) *2022 –*

*Computer Science and Information Systems (B.Sc.); **Grade: 5.0*** *2018 – 2022*

Second High School in Konin

Mathematical-Physical-IT profile *2015 – 2018*

WORK EXPERIENCE

Creotech Instruments S.A. Warsaw, Poland

Engineer Programist *March 2023 –*

- Developing software for custom embedded system designed for collection aviation data.
- Dealing with running and testing cross compiled code beyond deployment platform.
- Configuring custom Linux distribution with Yocto framework.

Warsaw University of Technology - Faculty of Mathematics and Information Science Warsaw, Poland

Laboratory assistant *October 2022 –*

- Conducting laboratories Operating System Programming and ASP.NET with Polish- and English-speaking students.
- Preparing tasks and evaluating students' code.

SUNTECH S.A. Warsaw, Poland

.NET Programist *June 2020 – April 2022*

- Developed application for semi-automatic planning FTTH and 5G networks. Used to work with Microsoft .NET technology
- Created evolutionary and conventional algorithms for network planning. Prepared data flow with big volume of data for those algorithm.
- Integrated algorithms with GIS planning application created in WPF.

PROJECTS

Simple CAD system | *GitHub*
- ∗ A C++/QT project where user can design any 3D object using parametric planes. After designing model user can generate GCode paths for milling.
- ∗ Implemented Entity-Componet-System pattern for objects representation of objects at scene. Used OpenGL for displaying scene and parallel computing.
- ∗ Createad as part of course at University, so all mathematical code created by myself.

One Click Desktop | *GitHub*
- ∗ Distributed system creating a mesh of worker nodes hosting virtual machines for remote desktop purposes (with hardware acceleration). Written in C#.
- ∗ Implements concurrent error mitigating communication based on RabbitMQ message broker. It allowed for horizontal scaling of administration nodes and vertical scaling of worker nodes running virtual machines.
- ∗ Created module for connecting worker node and VM hypervisor and general development of backend code.
- ∗ Machines are run with preconfigured GNU/Linux image storing user data using LDAP and NFS.

GPU Cluster Benchmarking
- ∗ Benchmarking and assistance with configuration of GPU cluster created from 4 NVIDIA DGX100 computers.
- ∗ Had to run NVIDIA HPC Benchmarks to test deployment of cluster. Benchmark had to be run on all 32 GPUs at once.
- ∗ As part of this task I helped administrator to polish configuration of OS on those clusters.

Skills

Programming: C#, C++, C, Python, MATLAB

Technologies: CUDA, OpenGL, DirectX11, Git, Linux

Languages: Polish (Native), English (Professional), German (Elementary)

Frameworks: ASP.NET, QT, WPF, BuildRoot, Yocto

Others: design and implementation of computer networks, LaTeX