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Education

- **University of Bonn** Bonn, Germany
  M.Sc. Computer Science *2014 - 2016*
  - Specialization in Computer graphics and Computer vision
  - Additional courses from Machine learning, Data mining and Digital signal processing

- **Jacobs University Bremen** Bremen, Germany
  B.Sc. Eletrical Engineering and Computer Science *2011 - 2014*

Research and Work Experience

- **Microsoft** Copenhagen, Denmark
  Senior Software Engineer (Last title change September 2022) *December 2016 - present*
  - Working in the Dynamics 365 Business Central group
  - Built a custom hotfix delivery system in Azure Dev-ops responsible for providing customers with security as well as quality updates globally while following safe deployment practices
  - Built custom pipelines for azure resource management, consolidation and periodic cleanups which helped save ˜10% compute operational costs
  - Responsible for building infrastructure around deployments, testing and operations of the product
  - Technologies used in day to day work: C#, Powershell, Azure SDK, ASP.Net core

- **University of Bonn** Bonn, Germany
  Master Thesis - 3D human pose estimation using deep networks *June 2016 - November 2016*
  - Achieved state of the art results in 3D human pose estimation using deep networks
  - Did several experiments by training convolutional neural networks using different techniques to predict the 3D human poses directly from a single RGB image *[document]*

- **Google Summer of Code** Bonn, Germany
  Open source software contributor *June 2016 - August 2016*
  - Worked with the PRISM model checker community
  - Improved the graph plotting abilities of the prism tool by adding new 2D and 3D plots support
  - Improved the GUI and general stability of the prism tool *[project page]*

- **University of Bonn** Bonn, Germany
  Graduate Teaching Assistant for Computer Vision *October 2015 - February 2016*
  - Worked with Prof. Dr. Jürgen Gall, the head of Computer Vision department at Uni Bonn
  - Responsible for scheduling and maintaining regular office hours to help students with course material, grading weekly assignments and keeping the professor updated with students' performance.

- **Serena Software** Cologne, Germany
  Software Process App Designer *January 2015 - June 2016*
  - Contributed software engineering expertise in the development of a customer relationship management (CRM) software from requirements definition through robust implementation

- – Successfully collaborated with a 3 person team to complete the implementation before the set deadline
- – Technologies used were Java, VBScript and JavaScript.

- **Jacobs University Bremen** — Bremen, Germany
  Student Research Assistant — *June 2014 - September 2014*
  - – Worked with Prof. Dr. Andreas Birk, the head of Robotics department at Jacobs University Bremen
  - – Modernized the user interface, fixed logical bugs and wrote technical documentation for a robot generated map scoring tool
  - – Deployed the tool on Linux with above threshold software quality
  - – Technologies used were Qt with C++ and OGRE framework

- **Jacobs University Bremen** — Bremen, Germany
  Teaching Assistant for Programming in Java — *September 2013 - January 2014*
  - – Responsible for giving weekly tutorials to students and grading assignments and exams

- **Jacobs University Bremen** — Bremen, Germany
  Bachelor's Thesis in Computer Graphics — *September 2013 - June 2014*
  - – Successfully designed a collision detection algorithm to provide a real time chewing simulation of a human teeth model with a gummy bear substrate
  - – Analyzed a detailed comparison of the designed method with the other state of the art collision detection methods. *[source code] [document]*

- **IAV Automotive Engineering** — Chemnitz, Germany
  Software Engineering Intern — *June 2013 - September 2013*
  - – Responsible for the development and testing of an internal tool at IAV used to evaluate simulation results
  - – Upon completion of internship made the tool robust enough for its initial launch inside the company.
  - – Technologies used were C++, Java swing and XML

Public Projects

- **Business Manager** — ReactJS, ASP.Net core
  A complete business management solution — *2023*
  - – Features include inventory management, invoicing, register management, reporting and partial HR management
  - – Supports multiple users with different permission levels
  - – Built with security and scalability in mind *[source code]*

- **Saliency Maps** — C++, OpenCV
  Selective attention in images to reduce processing times in fields like robotics — *2015*
  - – Winner of a competition held at University of Bonn computer vision department for the best implementation of a saliency system
  - – Coordinated and collaborated in a conflict free environment with another team member to deliver a robust and quality final product *[source code] [results]*

- **Procedural Modeling of Buildings** — Qt, C++, OpenGL
  Implementation of the paper 'Procedural modeling of buildings Muller et al' — *2015*
  - – Implementation allows modeling rich outdoor scenes using a compact input grammar
  - – The models can be interactively viewed and exported to hard disk for later use *[source code]*

- **JEditor**   Java Swing
  A lightweight text editor with many modern functions   *2014*
    - Developed an advanced desktop text editor which supports spell checking, word completion, syntax highlighting, file recovery and customizable UI
    - Regularly updated with bug fixes and new features. Packages are available for Linux and Window *[source code]*

- **PLY Visualizer**   Java, OpenGL
  Visualization of the Stanford PLY file format   *2014*
    - Developed software for rendering and interactive viewing of the ply format files. Packages are available for Linux *[source code]*

- **Alarm Clock**   Java Swing
  A cross platform alarm clock   *2014*
    - Developed an alarm clock for desktop that supports alert messages, widgets and priority alerts. Packages are available for Linux *[source code]*

For a complete list of my projects, please visit my github profile.

Skills

- **Dev Advance:** C#, C/C++, Java, MATLAB, ReactJS, OpenCV, Azure SDK, PowerShell, Spring framework

- **Dev Intermediate:** ProLog, Qt, OpenGL

- **Languages:** English (native), Urdu (native), Danish (intermediate), German (basic)

For a complete list of my skills, please visit my LinkedIn profile.

Interests

- Football, Travelling, Gaming and Fitness