JENS HOOGE

BIOINFORMATICIAN AND ASPIRING DATA SCIENTIST

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Profile

I'm a Bioinformatician with a strong background in Machine Learning, Data Analysis and Data Visualization. Besides being addicted to Massive Open Online Courses, I'm a highly innovative, creative thinker who always finds new ways to solve difficult problems.

Skills

Bioinformatics

Formulating and solving mathematical optimization problems for protein structure determination. Implementation, maintenance and application of advanced bioinformatics methods

Machine Learning

Extended strong theoretical background, by self-taught skills in applied predictive modelling using various open-source resources, ranging from academic talks and video lectures to Massive Open Online

Data Science

Ability to work with structured biological data with various genomics tools in complex workflows. Currently further deepening my understanding by taking the Coursera Data Science Specialization Course at

and databases used for drug discovery.

Courses.

Johns Hopkins University.

Technical

Data Extraction	Regression & Classification	R, MATLAB, Python, Git, SVN
Data Preparation	Feature Selection	RStudio, Shiny, Eclipse, Vim
Data Manipulation	Applied Predictive Modeling	MS Office
Data Visualisation	High Performance Computing	Windows, Linux, LSF, SGE

Education and Experience

Tübingen University
Diploma in Bioinformatics

Oct 2004 - Oct 2012

My thesis titled "Automatic Sidechain Assignment for NMR-Proteinstructure Determination by Integer Linear Programming." led to the development of RAILIN. A python toolkit, to predict protein structures from nuclear magnetic resonance data using an approach based on Integer Linear Programming and Bayes classification. It was conducted under supervision of Prof. Dr. Bernhard Schölkopf at Max-Planck-Institute for Intelligent Systems and Prof. Dr. Oliver Kohlbacher at Tübingen University.

Bayer HealthCare | Target Discovery Technologies
Computer Scientist Bioinformatics

Aug 2013 - Present

Implementation of highly parallel next generation sequencing data analysis pipelines in a high performance computing environment. Currently focused on ChIP- and RNA-seq technology. This also includes data exploration and visualisation, both statically and interactively. At the same time I'm promoting and implementing feature selection techniques as well as predictive models for drug sensitivity and RNAi datasets, using Penalized Regression Models.

eyevis GmbH

Jun 2013 - Jul 2013

Software Development Engineer

I was mainly responsible for the development of video IP-streaming solutions using Microsoft DirectShow- and the MainConcept Software Development Kit using C++ and WinAPI. The development process was pattern-driven and object oriented.

Computomics GmbH

Oct 2012 - Dec 2012

Bioinformatician

Responsible for data analysis and development of a python pipeline for next generation sequencing data.

Tübingen University | Anatomical Institute

Jan 2004 - Oct 2004

Biological-Technical Assistant

Involved in DFG funded project on the subject of development and differentiation of the nervous system. In particular responsible for gene expression studies and microarray analysis on the homeobox gene Emx2.

Tübingen University | Neuro-Oncology

Apr 2003 - Jan 2004

Biological-Technical Assistant

Work on cell-biological methods to develop stemcell therapies for brain tumors.

Migragen AG
Biological-Technical Assistant

Sep 2002 - Apr 2003

Involved in preclinical testing of recovery-enhancing substances in animal models for spine lesions in the area of in-vivo pharmacology.

Max-Planck-Institute for Dev. Biology | Genetics
Biological-Technical Assistant

Aug 1999 - Sep 2002

Amongst others involved in Tübingen zebrafish mutagenesis project 2000 as part of Tübingen 2000 Screen Consortium.

Education (Self-Learning)

Massive Open Online Courses - Coursera
Machine Learning (2014)
The Data Scientist's Toolbox (2014)
R Programming (2014)
Getting and Cleaning Data (2014)
Exploratory Data Analysis (2014)
Reproducible Research (2014)
Practical Machine Learning (2014)

Languages

German

Native Speaker

English

Fluent

Brazilian Portuguese

Very Good Command

Personal

Interests

Biking, Guitar, Movies,
Massive Open Online
Courses.

Links

LinkedIn, Blog, RPubs,
Kaggle, GitHub

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