

BORIS BOUTKOV

PERSONAL DATA

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OBJECTIVE

TO OBTAIN A FULL TIME POSITION IN A MODERN, FAST PACED, COMPUTATIONALLY DRIVEN ORGANIZATION.

WORK EXPERIENCE

NOV 2019 - PRESENT	SR. GENOMIC DATA ENGINEER AT REGENERON PRODUCING HIGH QUALITY QUANTITATIVE SOLUTIONS AND ENTERPRISE LEVEL DATA PIPELINES FOR GENETIC AND CLINICAL DATA AT SCALE. ENABLING STATISTICAL ANALYSIS, DEVELOPING BIOINFORMATICS ALGORITHMS, AND OPTIMIZING PRODUCTION WORK FLOWS FOR NEXT GENERATION ANALYTICS TOOLS IN THE CLOUD.
SEP 2012 - MAY 2019	GRADUATE RESEARCHER AND TEACHING ASSISTANT AT U. BUFFALO RESEARCHER: DEVELOPED PARAMETER AGNOSTIC PDE SOLVER FOR COMPOSABLE MULTI-PHYSICS SIMULATIONS IN LIBMESH - A DISTRIBUTED, OPEN SOURCE, C++ LIBRARY TEACHING: CALCULUS 1,2,3, LINEAR ALGEBRA, DIFFERENTIAL EQUATIONS, HIGH PERFORMANCE COMPUTING
DEC 2010 - JUN 2012	DEVELOPER/ANALYST AT AMKAI SOLUTIONS IN ARMONK, NEW YORK DESIGNED AND DEVELOPED LARGE HEALTH SOFTWARE PROJECT INVOLVING JAVA, SQL, HQL AND XML INTEGRATION. EXPERIENCE WITH PROJECT MANAGEMENT, DATABASE ANALYSIS, AND ALGORITHM OPTIMIZATION.
JAN 2009 - MAY 2010	MATHEMATICAL RESEARCHER AT R.P.I. EXPLORED NUMERICAL OPTIMIZATION STRATEGIES RELATING TO STOCHASTIC EPIDEMIOLOGY STUDIES OVER VARIOUS NETWORKS. STUDY OF DISEASE AND SOCIAL COST MINIMIZATION STRATEGIES WITH VARIOUS PARAMETER INVESTIGATIONS, DATA EXPLORATION AND INTERPRETATION THROUGH MATLAB.

EDUCATION

SEP 2014 - MAY 2019	PH.D. IN COMPUTATIONAL AND DATA ENABLED SCIENCES UNIVERSITY AT BUFFALO, BUFFALO, NY GPA: 3.9/4.0 ADVISOR: PAUL T. BAUMAN THESIS GEOMETRIC MULTIGRID FOR UNSTRUCTURED FINITE ELEMENTS: IMPLEMENTATION AND APPLICATIONS
SEP 2012 - MAY 2014	MASTERS IN MATHEMATICS GPA: 3.9/4.0 UNIVERSITY AT BUFFALO, BUFFALO, NY
SEP 2006 - MAY 2010	B.S. DUAL DEGREE IN APPLIED MATHEMATICS AND PHYSICS RENSSELAER POLYTECHNIC INSTITUTE, TROY, NY GPA: 3.2/4.0 ADVISOR: PETER R. KRAMER THESIS : RISK PERCEPTION IN EPIDEMIC MODELING WITH HETEROGENEOUS CONNECTION STRENGTHS MINORS : PHILOSOPHY, PSYCHOLOGY DEANS LIST : FALL 2006 - SPRING 2009

PRESENTATIONS, PUBLICATIONS, AND AWARDS

JULY 2019	JOURNAL OF COMPUTATIONAL SCIENCE: ENABLING COMPOSABLE LINEAR SOLVERS FOR UNSTRUCTURED FINITE ELEMENT METHODS USING LIBMESH AND PETSC
MAY 2019	PH.D. DISSERTATION: GEOMETRIC MULTIGRID FOR UNSTRUCTURED FINITE ELEMENTS: IMPLEMENTATION AND APPLICATIONS
APRIL 2019	UB CDSE BEST RESEARCH POSTER AWARD
MARCH 2017	SIAM CONFERENCE ON COMPUTATIONAL SCIENCE AND ENGINEERING, BOSTON, MA PRESENTED: (TOWARDS A) VARIATIONAL IMMERSERED BOUNDARY IMPLEMENTATION THROUGH GRINS AND LIBMESH
DEC 2014, 2015	U. BUFFALO COMPUTATIONAL DATA SCIENCE FELLOWSHIP
JUNE 2014	MATHEMATICAL PROBLEMS IN INDUSTRY, NEW JERSEY INSTITUTE OF TECHNOLOGY COLLABORATIVELY INVESTIGATED VARIOUS PROBLEMS POSED BY INDUSTRIAL REPRESENTATIVES WHILE PEER REVIEWING PARTNER GROUPS IN WEEK LONG EXPLORATORY PROJECT SPRINTS. REPORT PRESENTED: A SMOOTH RIDE ON A BUMPY ROAD, MODELING AND NUMERICAL INVESTIGATION OF VEHICLES DRIVING ON BUMPY ROADS.

LANGUAGES AND COMPUTER SKILLS

PROFICIENT	RUSSIAN, C++, C, PYTHON, SCALA, SPARK, MPI, MATLAB/OCTAVE, SQL, AWS(S3/EC2), LINUX, GIT, \LaTeX
WORKING KNOWLEDGE	SPANISH, MAPLE, MATHEMATICA, JAVA, HTML, CSS