Dane JOHNSON

PERSONAL DATA

PLACE AND DATE OF BIRTH:	Algonquin, IL | 11 November 1995
ADDRESS:	3434 Magnolia Avenue, Saint Louis, Missouri, United States
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WORK EXPERIENCE

AUG 2015-DEC 2018	Tutor at SOUTHERN ILLINOIS UNIVERSITY EDWARDSVILLE, Edwardsville *Math/Computer Science/Reasoning and Argumentation Tutor* Worked with university students on both walk in and scheduled basis for a variety of undergraduate level Math, Computer Science, and Reasoning and Argumentation courses, including Calculus, Discrete Math, Linear Algebra, and Algorithms.
JAN-JUL 2019	Developer for MONSANTO/BAYER, Saint Louis Developed internal applications for human resource managment, later developed point of sale interface for seed-purchasing customers.
MAY-AUG 2018	Instructor for ID TECH CAMPS, Saint Louis Instructed students aged 7-17 on a range of technology related topics, including 3D game design with Unreal Engine, robotics programming with Scratch, and Game Scripting with Lua. Taught independently and with co-instructors.
OCT 2017-MAR 2018	Cooperative at UNIGROUP, Fenton Created software to facilitate relocation of Saint Louis area residents. Participated in company Hackathon with team of 3, won first prize. Created solution for conversion of cubic feet to linear feet by generalization of bin-packing technique.
JAN-JUL 2017	Cooperative at MARYVILLE TECHNOLOGIES, Saint Louis Collaborated with a team of undergraduate cooperatives to research software tools for Information Technology consultants at the company. Created prototypical software representative of research for educational facilities in the Saint Louis area. Co-created Codesplain, a piece of software to allow instructors and students to interact with annotated and lexographically tagged code.
JAN-MAY 2015	Tutor at SOUTHERN ILLINOIS UNIVERSITY EDWARDSVILLE, Edwardsville Worked with students from area high schools and junior-high schools on Mathematics topics. Maintained scheduled sessions with as many as 4 students weekly throughout semester.

EDUCATION

CURRENT
Doctor of Philosophy in Computer Science at **Washington University**, Saint Louis

DECEMBER 2018
Bachelor of Science in Computer Science at **Southern Illinois University Edwardsville**, Edwardsville
MINOR: Mathematics
GPA: 3.85/4.00

AWARDS

MAY 2014	Provost Scholarship
AUG 2014-DEC 2018	Dean's List
AUG 2014-DEC 2018	SIUE Honor's Program

Leadership and Involvement

Treasurer	Computer Association of SIUE
Scholarship Panel Member	SIUE Meridian Scholars Day
Competitor	International Collegiate Programming Contest

Computer Skills

Languages:	C, Cilk, Java, Python, Javascript, Clojure, HTML, LaTeX
Platforms:	Windows, OSX, GNU/Linux, Arch Linux
Web:	LAMP, CSS, Flask, node.js, React

Relevant Coursework and Projects

Spring 2016 | **CS-312 Computer Systems and Architecture**

Investigated computer organization and assembly languages. Wrote functions MIPS RISC superscaler processor simulator in Python.

Fall 2016 | **CS-325 Operating Systems**

Learned Linux operating system capabilities, shell commands, and Emacs. Understood multi-user systems and multiprogramming. Created kernel components for DLXOS including mutual exclusion locks and WinNT scheduler.

Fall 2017 | **CS-454 Theory of Computation**

Exhaustively explored both deterministic and non-deterministic finite state machines as well as regular languages and expressions. Examined push-down automata as well as context-free languages and grammars. Comprehended Turing machines, recursive and recursively enumerable languages, and uncomputability.

Spring 2018 | **CS-456 Advanced Algorithms**

Studied algorithmic complexity classes and comparisons, as well as a variety of algorithmic categories, including Greedy solutions, Dynamic Programming, Branch and Bound, Approximation, and Backtracking. Solved problems in the spaces of graph theory, network flow, computational geometry, and path finding. Implemented Johnson's algorithm for all-pairs-shortest-path with a Fibonacci Heap structure.

Spring 2018 | **HONS-320B Interdisciplinary Problems in the Physical Science, Life Sciences, and Technology: On Robots**

Collaborated with technical and non-technical cohorts to examine the role of robotics in society. Analyzed technical literature from the likes of Turing, McCarthy, and Minsky, as well as philosophical works from Searle, Bostrom and Dennett, and finally fictional works from Dick and Čapek. Co-authored paper and presentation concerning cybernetic enhancements and potential shifts in societal views and thought patterns concerning them.

Spring 2020 | **CSE-539S Concepts in Multicore Computing**

Both utilized and implemented facets of multicore computing systems, primarily Cilk. Final project made use of existing research into nonblocking Cilk runtime implementations.