

# DEREK KUNKEL

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## Education

### University of Saskatchewan

*Bachelor of Science in Computer Science*

2018 – 2023

*Saskatoon, Saskatchewan*

### University of Saskatchewan

*Bachelor of Science in Physiology and Pharmacology*

2010 – 2011, 2014 – 2017

*Saskatoon, Saskatchewan*

### Northern Alberta Institute of Technology

*Instrumentation Engineering Technology*

2011 – 2013

*Edmonton, Alberta*

## Relevant Coursework

- Software Engineering
- Algorithms in Bioinformatics
- HCI
- Full Stack Web Programming
- Machines and Algorithms
- GUI Implementation
- Programming Language Paradigms
- Object-Oriented Systems
- Deep Learning

## Technical Skills

**Languages:** Python, JavaScript, HTML/CSS, Java, Scala, SQL, R

**Developer Tools:** Git, Docker, VS Code, JetBrains IDEs, Figma

**Technologies/Frameworks:** Linux/WSL, GitHub, Node, React, Material-UI, Microsoft Office Suite

## Projects

### Motel Management App | *Docker, JavaScript, React, Node, Express, MySQL, Auth0*

- Developed a full-stack web application to allow user account creation with varying levels of access according to account type, room reservation both online as a customer and from the front desk as an employee, and employee shift scheduling
- Employed a Scrum development methodology, asynchronously tracking all epics, stories, tasks, and bugs in Jira, as well as observing thrice-weekly stand up meetings

### Sorghum Crop Image Classifier | *Python, Keras/TensorFlow*

- Developed a LeNet deep learning model for classifying images of sorghum plants trained on the Sorghum-100 dataset, serving as a baseline of performance for comparison with more sophisticated CNNs
- Completed a detailed analysis of the dataset, devised and ran experiments to demonstrate model accuracy with and without data augmentation, and authored a technical paper on the experiment's results

### Version Controlled Songwriting App UI | *Figma*

- Designed a low-fidelity prototype of a UI for a version controlled songwriter's assistant, followed by a heuristic evaluation to find usability problems in our design and inform future UI iterations
- Used Figma to create a medium-fidelity prototype of the design, followed by user evaluation questionnaires and interviews to establish further improvements and direction to the UI design

## Experience

### Northwest School Division

Summer 2010, 2012–13, and 2015–18

*Summer Technology Technician*

*Meadow Lake, Saskatchewan*

- Answered user calls and emails concerning technology service and inquiries.
- Created service and maintenance tickets with relevant information in an online database
- Inventoried and inspected network equipment, computers, and computer accessories throughout the school division
- Installed and performed troubleshooting of educational and enterprise hardware/software
- Installed and repaired network infrastructure
- Worked as part of a team to accomplish tasks quickly and efficiently

### Northwest School Division

February 2014–August 2014

*IT Technician*

*Meadow Lake, Saskatchewan*

- Performed remote troubleshooting and diagnosis of laptop, desktop, server, network, and software issues
- Repaired/updated laptop, desktop, server, and network hardware at the board level
- Lead a team of summer students in the installation and inventory of technology assets
- Contributed articles and how-to documents to the organization's IT knowledge base

### Meadow Lake Mechanical Pulp

September 2013–February 2014

*Instrumentation Engineer*

*Meadow Lake, Saskatchewan*

- Installed, calibrated, diagnosed, and repaired industrial transmitters and sensors
- Utilized SAP software to manage tickets involving equipment requiring repair/replacement