



Indic Dictionaries

Sarah Kazi



Kailash Nadh

Zerodha
CTO

Indic Digital Archive Foundation
Founder

Malayalam to English Dictionary
olam.in

Kannada to English Dictionary
alar.in

Open Source Searchable Dictionary
dict.press

OLAM

ഓളം

അതിവേഗ ഇംഗ്ലീഷ് → മലയാളം ← മലയാളം നിഘണ്ടു

English - മലയാളം



|



15°
വാർഷികം

മലയാളം ട്രൈപ്പിംഗ്

English പദമാലിക

മലയാളം പദമാലിക

Indic Archive



Open Source

ALAR

ಅಲರ್

ಶ್ರೀ. ವಿ. ಕೃಷ್ಣ ಅವರ ಕನ್ನಡ - ಇಂಗ್ಲಿಷ್ ನಿಘಂಟು

"Alar" V. Krishna's Kannada → English dictionary

Kannada - English ▾



[Kannada glossary](#)

[About](#)

IDAF Support by ZERODHA

Inspiration

Kailash Nadh – Olam (10k entries)

K.J. Joseph – Olam (200k entries)

V. Krishna – Alar (400k entries)

N. Shreedharan – Newspaper Article

E.K. Kurup – Olam (~2 million entries)



How does search work?

1. ENGLISH



Stemming.

SWIM	→	SWIM
SWIMS	→	SWIM
SWIMMER	→	SWIM
SWIMMING	→	SWIM



But what about Indian Languages?



Abugida

SOLUTION?
PURELY PHONETIC PERSPECTIVE.



MLPhone, KnPhone, IndicPhone

HESARU	→	HSR
HASARU	→	HSR
HASARE	→	HSR

ELEPHANT	→	ELFNT
ELEFANT	→	ELFNT
ELFINT	→	ELFNT

Word	key0	key1	key2	Transliteration	Metaphone
നീലക്കുയിൽ	NLKYL	NLKYL	N4LK25Y4L	Neelakkuyil	NLKYL
മൃഗം	MRK3	MRK3	MRK3	Mrugam	MRKM
മ്രിഗം	MRK3	MRK3	MRK3	Mrigam	MRKM
ഉത്സവം	U0SV3	U0SV3	U0SV3	Uthsavam	U0SFM
ഉൽസവം	U0SV3	U0SV3	U0SV3	Ulsavam	ULSFM
വാഹനം	VHN3	VHN3	VHN3	Vaahanam	FHNM
വിഹനനം	VHNN3	VHNN3	V4HNN3	Vihananam	FHNNM
രാഷ്ട്രീയം	RSTRY3	RS1TRY3	RS1TR4Y3	Raashtreeyam	RXTRYM
കണ്ണകി	KNK	KNK	KN2K4	Kannaki	KNK
കന്യക	KNYK	KNYK	KNYK	Kanyaka	KNYK
മനം	MN3	MN3	MN3	Manam	MNM
മണം	MN3	MN13	MN13	Manam	MNM
വിഭക്ത്യാഭാസം	VBK0YBS3	VBK0YBS3	V4BK0YBS3	Vibhakthyaabhaasam	FBHK0YBHSM
വലയം	VLY3	VLY3	VLY3	Valayam	FLYM
വളയം	VLY3	VL1Y3	VL1Y3	Valayam	FLYM
രഥം	R03	R03	R03	Ratham	R0M
രദം	R03	R03	R03	Radam	RTM
രത്നം	R03	R03	R03	Rattham	RTM
രധം	R03	R03	R03	Radham	RTHM

Vowels

അ	ആ	ഇ	ഈ	ഉ	ഊ	ഋ	എ	ഐ	ഐ	ഒ	ഓ	ഔ
A	A	I	I	U	U	R	E	E	AI	O	O	O

Consonants

ക	ഖ	ഗ	ഘ	ങ	ച	ഛ	ജ	ഝ	ഞ	S	O	ഡ
K	K	K	K	NG	C	C	J	J	NJ	T	T	T
ത	ന	ത	ഥ	ദ	ധ	ന	പ	ഫ	ബ	ഭ	മ	യ
T	N1	0	0	0	0	N	P	F	B	B	M	Y
ര	ല	വ	ശ	ഷ	സ	ഹ	ള	ഴ	റ			
R	L	V	S1	S1	S	H	L1	Z	R1			

Chills

ൽ	ശ്	ൺ	ൻ	ർ	ക്
L	L1	N1	N	R1	K

Compounds

ക	ഗ്	ങ	ച	ജ	ഞ	ട	ണ്	ത്ത	ദ	ധ	ന	ന്	ങ്ക	ന്ത	ബ
K2	K	NG	C2	J	NJ	T2	N2	0	D	D	NN	N0	NK	N1T	B
പ	മ്മ	യ	ല	വ	ശ	സ്	ള	ഞ്ച	ക്ഷ	മ്പ	റ്റ	ന്റ	ന്ത	രി	ര
P2	M2	Y	L2	V	S1	S	L12	NC	KS1	MP	T	NT	N0	R	R

Modifiers

ഃ	ഃ	ഃ	ഃ	ഃ	ഃ	ഃ	ഃ	ഃ	ഃ	ഃ	ഃ	ഃ	ഃ	ഃ	ഃ
			R	3	4	4	5	5	6	6	7	8	8	9	9

Autocomplete using Trie

```
impl Autocomplete {
    pub fn new() -> Self {
        Self {
            tries: HashMap::new(),
        }
    }

    /// Build trie for a language from words. Words are normalized and sorted before insertion.
    pub fn build(&mut self, lang: &str, words: Vec<String>) {
        let mut b = TrieBuilder::new();
        for w in words {
            let wn = normalize_word(&w);
            if !wn.is_empty() {
                b.push(wn);
            }
        }
        self.tries.insert(lang.to_string(), b.build());
    }

    /// Query autocomplete results for a prefix (normalizes the prefix internally).
    /// Returns up to `num` matching words.
    pub fn query(&self, lang: &str, prefix: &str, num: usize) -> Vec<String> {
        let word = normalize_word(prefix);
        if word.is_empty() {
            return Vec::new();
        }

        let trie = match self.tries.get(lang) {
            Some(t) => t,
            None => return Vec::new(),
        };

        let out: Vec<String> = trie.predictive_search(&word).take(num).collect();
        out
    }
}
```



V4 – Built using Go and Postgres

WHY THE SWITCH FROM POSTGRES TO SQLITE?

The background features a light beige color with stylized green leaf patterns. On the left, there is a large green circle and a smaller red circle. On the right, there is a faint green leaf pattern.

V5 – Built using Rust and SQLite

WHY THE SWITCH FROM GO TO RUST?



Vernacular languages, accent differences

CONTROVERSIAL MATTER ☹



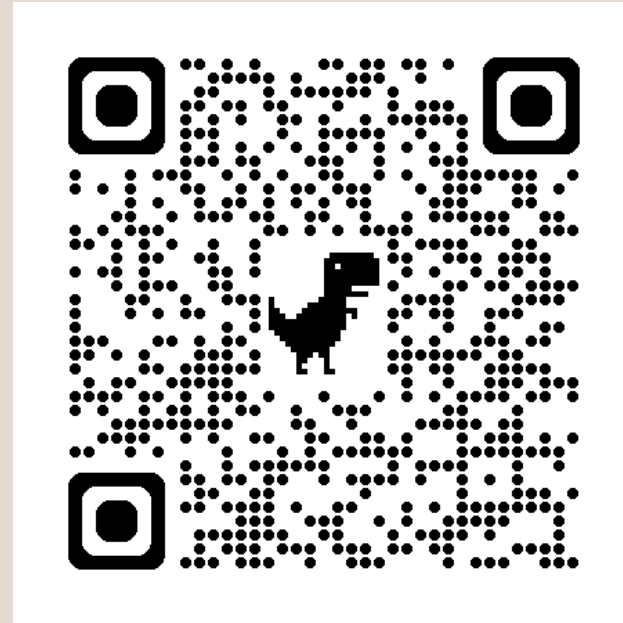
Future plans:





You can contribute too!

“ FOSS is not black-and-white.
I have never written FOSS in expectation of monetary returns, even when I was barely making a living. I did it because I liked it. I continue to write useful FOSS because I like doing it and seeing people use my software makes me happy. Do I get annoyed when entitled demands show up on GitHub issues? I do. Do I get annoyed when people don't read the documentation and post trivial questions wasting my time? I do. Will I get annoyed if a mega-corp consumes my work in ways I don't like? I most likely will. Will any of these detract me from writing FOSS and giving it away? No. I am just one drop in the ocean of FOSS contributors who write FOSS for countless personal reasons. That is the beauty of FOSS. ”



Thank You :))